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CORPORATION OF MADRAS

HEALTH DEPARTMENT

ANNUAL REPORT

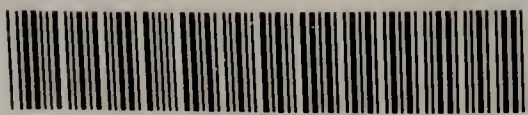
FOR

1946

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CORPORATION OF MADRAS

HEALTH DEPARTMENT

ANNUAL REPORT FOR 1946

CONTENTS

INTRODUCTION	..	..	Pages i to v
REPORT FOR 1946	..	..	Pages 1 to 42
			Page
Vital Statistics	..	..	1
Vaccination	..	..	8
Medical Relief	..	..	12
Medical Inspection of } Corporation Schools }	..	..	15
Sanitation	..	..	17
Working of Quarantine } Regulations, Madras Port }	..	..	24
Conservancy	..	..	26
Mosquito Control Measures	..	..	32
Food Analysis by the Public Analyst	..	..	34
Water Analysis by the } Water Analyst }	..	..	38
Child Welfare Scheme } by the Lady Supdt. }	..	..	40
APPENDIX OF STATEMENTS	..	..	Pages 43 to 71
			Page
Vital Statistics	..	..	43
Vaccination	..	..	54
Medical Relief	..	..	56
Medical Inspection	..	..	59
Sanitation	..	..	61
Food Analysis	..	..	63
Water Analysis	..	..	65

INTRODUCTION

In presenting the report on the health of the City of Madras for 1946, I may mention that I succeeded Dr. C. S. Govinda Pillai and assumed charge of the office of the Health Officer on 13-5-1946.

In my introduction to the Health Report for 1945, I have referred to the work of my predecessor who rendered valuable services in the cause of the public health of the city. Several bright features noticeable in the report for 1946 are also attributable to his able administration.

The most important event of the year is the extension of the limits of the city which took effect from 1-4-1946. The area of the city was increased by about 20 sq. miles. Saidapet, Sembiam, Aminjikarai and 14 other villages have been included in the city making Greater Madras about 50 sq. miles in extent. The incorporation of these areas contiguous with the city proper will not only facilitate the movement of a portion of the population, especially of the upper and lower middle classes, to these parts but also enable the Corporation to exercise proper control over their sanitation and health. The Government in approving the proposal of the Corporation to enlarge the city have rightly earned the gratitude of the public of the city.

The next event deserving of notice is the strike of conservancy labourers during the period 13-8-1946 to 3-9-1946. It was so fraught with danger to the health of the city that no pains were spared to cope with the situation effectively from the outset. The sanitary and conservancy staff who were fully prepared to meet the situation rose to the occasion, marshalled loyal workers and enlisted willing recruits and utilized their services from the very first day of the strike for maintaining the sanitation of the city. The strike extended for 22 days and the city was conserved daily and the streets and thoroughfares were kept clean. I had the fullest support from the Commissioner, the Mayor and the Council in controlling the situation. The ready and effective help offered by the police, the willing co-operation of the public and the assistance so readily given by the press contributed to the success achieved by the department in meeting the difficult situation and preventing any deterioration in the health of the city.

The need for the introduction of mechanised transport for conservancy work and the extension of sewerage into every nook and corner of the city and the complete eradication of the system of manual removal of filth are two points that cannot be lost on us as a result of the strike.

Another serious situation was caused by the floods following the unusual heavy monsoon rains. The havoc caused by the floods was the worst since 1943. The Buckingham Canal overflowed its banks in spite of the precautionary measures taken to prevent it. The sufferings and misery of

those affected by the floods would have been greater but for the relief measures which were organised and carried out immediately by the Corporation. Every department lent a helping hand and it devolved on the Health Department to look to the feeding and comfort of the refugees accommodated in the several Corporation buildings. The Midday Meals Centre, the management of which was transferred to the Health Department, was put to the severest strain in preparing the food needed for distribution at the refuge camps. The sanitary and conservancy staff had to work hard in looking after the feeding and conservancy arrangements at the relief centres. Thanks are due to the members of the Health Staff, every one of whom willingly participated in this humanitarian work and did his best to alleviate the sufferings of the poor in the devastated areas. It is worthy of note that as a result of the efficient and prompt preventive and relief measures, there was no incidence at all of bowel or other diseases which usually follow in the wake of such disasters.

The vital statistics for the year have recorded a phenomenal increase in the number of births probably due to the return of young men from war service and a reduction in mortality in spite of the continued prevalence of overcrowding in houses and rationing of essential food-stuffs. The estimated population of 8,46,948 for the mid-year of 1946 is a misnomer. The actual population was considerably more and it is a matter for congratulation that the health of the city as evidenced by the statistical returns was better than in the preceding years. The number of births, viz., 38,365 with a birth-rate of 45.29 is the highest figure recorded in any year. The increase over the number of births for 1945 was 7,816. The mortality rate of 29.74 per mille for 25,185 deaths in the year is the lowest in as much as the death-rate of 22.67 per mille for 1942 has to be considered as sub-normal.

A reduction in the number of deaths due to general respiratory diseases and tuberculosis is noticeable. There has been a considerable abatement in dust nuisance, which is a potent factor in the causation of respiratory diseases, due to the tarring and cementing of roads. But lack of hospital accommodation for cases of Tuberculosis requiring institutional treatment is a serious handicap in effectively tackling the incidence from this disease. Notwithstanding the fact that the construction of a Tuberculosis Hospital in Konnur Road touches only a fringe of the problem, the munificence of Rao Saheb Sri T. P. Ramaswami Pillai merits appreciation as a step in the right direction to combat the disease.

The infantile and maternal mortality rates also decreased appreciably. The rate of 213.82 for infant deaths and 5.07 for maternal deaths in 1945 declined to 185.06 and 3.23 respectively in the year under report. The continuance of the scheme for the supply of milk to priority consumers should have had its effect in improving the disease-resisting vitality of expectant and nursing mothers and infants among the poor for whose benefit the free supply was undertaken by the Corporation and Government. During the year under report 11 general dispensaries were also utilized for the free distribution of milk. The Medical Officers in charge of these dispensaries attended to this work after the dispensary hours in the morning and evening.

The starting of the Public Health Laboratory and the opening of the Industrial Home for able-bodied beggars have provided the city with 2 institutions of great utility. It is hoped that the citizens and the medical practitioners will avail themselves more and more of the facilities afforded by the Pathologist's Laboratory. The Industrial Home, it is expected, will discourage begging by able-bodied persons and benefit those committed to the Home by sending them out as better citizens able to eke out an honest livelihood.

The site given by Dr. Sir Alagappa Chettiar for a Leprosy Sanatorium was assigned to the Corporation. The proposal for starting the institution is under consideration.

School medical inspection work was made more effective by providing for the treatment of the defectives by the Medical Inspectors themselves instead of sending them for treatment to the Corporation dispensaries near by.

The scheme for the free supply of milk to poor children attending Corporation schools was started from 1-4-1946 with about 1,800 measures made available by the Government for the purpose. Selected pupils were each given one ollock of milk daily. With the reduction in the quantity of milk supplied by the Government after the reopening of the schools on 17-6-1946 each pupil was given only $\frac{1}{2}$ an ollock per diem and the distribution had to be restricted to schools located in labour and slum areas. The Government sanctioned in G. O. No. M. S. 831 the free distribution of milk reconstituted from skimmed milk powder and it was supplied to pupils during the months of December, 1946, and January and February, 1947.

The work in the Public Analyst's Laboratory has increased to a considerable extent. The Public Analyst had to analyse and report on 2,665 samples taken under the Food Adulteration Act and on 1,181 informal samples sent departmentally. 1,060 of the informal samples were samples of milk supplied to priority consumers. With the sanction of the Council analysis of food samples received from private parties and co-operative societies was undertaken on payment of fees.

In conclusion, I must gratefully acknowledge the valuable assistance given to me by my assistants and by every member of the department.

P. SADASIVAN, L.M. & S., B.S.Sc.

2-7-1947

Health Officer

It is gratifying to note that despite the abnormal increase in the population of the city and the consequent overcrowding, the continued existence of the difficult conditions brought about by the war, the scarcity and the high cost of food stuffs, the havoc caused by the floods and the strike launched upon by the Corporation labour staff including conservancy workers which continued for over three weeks, the health of the city showed marked improvement all round during the year. The salient features were the fall in the death rate and the infantile and maternal mortality rates and the general

reduction in the number of deaths from principal diseases. The birth rate increased from 36.63 per mille in 1945 to 45.29 in 1946 which is the highest on record, but it must be said here that this calculation is based on the estimated population of 8,46,948 for the mid-year of 1946 whereas the actual population may be anything between 12 and 13 lakhs. The death rate fell from 32.71 per mille in 1945 to 29.74 in 1946 and the rates of infantile mortality and maternal mortality fell from 213.82 and 5.07 per 1000 live births in 1945 to 185.06 and 3.23 per thousand live births respectively in 1946. There was a general reduction in the number of deaths during the year under principal diseases in spite of the increase in population. The Government, in their reviews on the health administration reports of the previous years, have been pointing out the need to improve the sanitation of the city adequately for prevention of a large incidence of deaths from respiratory diseases. Dustless surfacing of a number of roads in the city, the general precautionary methods adopted, the advice and treatment given at the Tuberculosis Clinic at Pulianthope have contributed considerably to the reduction of respiratory diseases in general and particularly the dreadful disease "Tuberculosis". The Tuberculosis Hospital newly constructed in Konnur Road will supply a long felt want when it begins to function in the next two or three months. The city was practically free from "Cholera" during the year. There was considerable reduction in the number of deaths from small-pox, the number of deaths being 162 against 192 in 1945.

The health of the city was endangered by the unexpected floods during the rainy season. A number of slum dwellers were rendered homeless. The health staff did their best to render relief to these people and the Midday Meals Centre run by the Corporation came in handy to supply meals to those affected by the floods and sheltered in the Corporation school buildings. Over 1,30,000 meals were supplied in the course of 14 days. The prompt preventive measures taken by the Health Department to disinfect the areas affected by the floods and the steps taken to drain the surplus water into the Cooum and the Buckingham Canal averted the outbreak of epidemics in the city.

The Corporation workers, particularly the conservancy workers, were on strike for 22 days from 13-8-1946. Arrangements had been made in advance to carry on the essential services during the strike with the few loyal workers and casual labour employed then and there. Seven centres were opened in the Corporation buildings for housing and feeding the workers. As these workers were threatened with violence by the strikers, it became difficult for them to go to their houses for food and return to work. Consequently they had to be sheltered in our own buildings and fed there for the entire period of the strike. Risk bonus was paid to all loyal workers and new recruits were paid at Rs. 2 each per day with a view to enlist as many men as possible. The officers and staff of the Health Department worked vigorously despite picketting, obstruction, mob demonstrations and violence indulged in by the strikers and the normal services were carried on under stress with the help of the police. The excellent work done by the loyal workers and the efficient supervision exercised by the officers and other superior staff deserve appreciation. But for the very valuable assistance and protection given by the police, we would not have been able to maintain our services during the long period of strike.

As the sanitary conditions in the areas adjoining the city were far from satisfactory, as there was always the risk of the city getting infection from these environs, as haphazard development of these areas has to be prevented and as congestion in the city has to be relieved the Council resolved to include these areas in the city and bring them in conformity with the standards of the city in point of sanitation and public health. Government were pleased to include the areas of Saidapet, Sembiam and Aminjikarai and 14 other villages within the city with effect from 1-4-1946. It will take some years to extend all the amenities of the city to those areas. But, within the short space of a year, improvement has been shown in the health and sanitary conditions of these areas. Protected water supply has been extended to Aminjikarai and 40 Myers pumps were installed in the other new areas. 9 septic tank latrines at a cost of over Rs. 40,000 are under construction. Two child welfare centres were opened. Roads were improved at a cost of over Rs. 1.0 lakh. Certain important roads have been given dustless surfacing. The benefit of free midday meals has been extended to the poor children reading in the schools in these areas.

The Maternity and Child Welfare Scheme of the Corporation continued to be popular. There were 21 child welfare centres and 12 maternity wards with 72 beds under the scheme. The infantile mortality rate in respect of cases of labour coming under the Child Welfare Scheme was 102.8 per mille during the year against 185.06 for all births in the city. This is the lowest death rate on record. The Tiruvoteeswarar Maternity Home in Choolai which has accommodation for 32 beds has been completed. It will begin to function in about a month. The Council is anxious to open more maternity wards and child welfare centres. Want of suitable accommodation and dearth of qualified Health Visitors and Sick Nurses are greater impediments in the way of expansion of the Scheme than finance. Unless the Buildings (Lease and Rent) Control Act 1946, is suitably amended so as to enable the Collector to allot accommodation for Corporation purposes also, it will be very difficult to expand the scheme to the extent the Corporation desires.

The scheme of converting private dry latrines into flushout latrines was pushed through vigorously with a view to reduce fly nuisance and improve the sanitation of sewered areas. As many as 2,387 new flushout latrines were provided during the year 1946-47.

Rao Bahadur Dr. C. S. Govinda Pillai who held the office of the Health Officer for over 18 years passed away suddenly in May, 1946 and Dr. P. Sadasivan succeeded him. I must record here my appreciation of the good work done by the Health Officer and his staff during the year.

The Lady Superintendent, Child Welfare Scheme, and her staff deserve special praise for the good work they have done during the year and for having made the child welfare centres and the maternity wards more popular.

C. NARASIMHAM

Commissioner

19-8-1947

Summary of Vital Statistics for 1946

Area	...	Greater Madras 49·74 Sq. miles	Madras Proper 29·81 Sq. miles
Population (estimated for mid-year, 1946)	...	9,53,659	8,46,948
Average density per acre	...	30·2	45·0
Births excluding still-births	...	41,874	38,365
Birth-rate (per 1,000 estimated population)	...	43·91	45·29
Deaths excluding still-births	...	27,381	25,185
Death-rate (per 1,000 estimated population)	...	28·71	29·74
Natural increase	...	14,493	13,180
Still-births	...	1,505	1,388
Infantile deaths	...	7,663	7,100
Infantile death-rate (per 1,000 live-births)	...	183·00	185·06
Maternal deaths	...	149	124
Maternal death-rate (per 1,000 live-births)	...	3·56	3·23

Deaths from Principal Causes

		Greater Madras Deaths	Death-rate	Madras Proper Deaths	Death-rate
Cholera	...	1	0·001	1	0·001
Dysentery and Diarrhoea	...	3,010	3·16	2,713	3·20
Small-pox	...	169	0·18	162	0·19
Malaria	...	45	0·05	37	0·04
Enteric fever	...	107	0·11	87	0·10
Tubercle including Tubercle of Lungs	...	405	0·42	352	0·42
Respiratory diseases	...	5,878	6·16	5,523	6·52

VITAL STATISTICS

The outstanding features of the state of public health in the city of Madras proper during the year 1946, as revealed by the statistical returns of births and deaths, are the following :—

1. The birth-rate increased from 36·63 in 1945 to 45·29 in 1946, which is the highest rate so far recorded,

2. The death-rate decreased from 32·71 in 1945 to 29·74 in 1946, which is the lowest on record since 1942,

3. The rate of infantile mortality declined from 213·82 per 1,000 live-births in 1945 to 185·06 in 1946, which is the lowest recorded rate,

4. The maternal mortality rate decreased from 5·07 per 1,000 live-births in 1945 to 3·23 in 1946, which is also the lowest rate ever recorded in the city and

5. The death-rates under all the principal causes of deaths show reduction as compared with the figures for 1945.

It is, therefore, evident that during the year under report the public health of the city of Madras was more satisfactory than in the previous year.

Meteorology :—The atmospheric conditions recorded during 1946 are furnished in Annual Form A in the appendix.

Rainfall :—The total rainfall of 82·12 inches recorded during the year under report was 39·41 inches more than the rainfall in the previous year and 21·86 inches more than the average rainfall during the quinquennium, 1941-45. The rainfall during 1946 is the highest recorded since 1943 when 84·05 inches of rain fell. Many parts of the city were flooded and extensive relief measures were immediately organised and carried out.

The following statement furnishes the rainfall in the city in each quarter during the previous five years, 1941-45, and in 1946.

Year	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
1941	0·75	4·00	10·80	45·79	61·34
1942	0·05	3·29	9·00	22·88	35·22
1943	2·73	16·90	11·54	52·88	84·05
1944	12·84	4·08	15·83	45·22	77·97
1945	0·12	6·01	15·63	20·95	42·71
1946	1·51	4·51	15·18	60·92	82·12

Area and population :—On 1-4-1946 the area of the defunct Saidapet Municipality comprising Saidapet, Guindy, West Mambalam and Kodambakkam, the area of the defunct Sembiam Panchayat Board comprising Sembiam and Aynavaram, the area of the defunct Panchayat Board of Aminjikarai and parts of Chingleput District Board comprising Adyar, Velacheri, Urur, Kottur, Pallipattu, Kalikunram, Ikkattuthangal, etc. were included in the Madras City proper. The extent of areas so added is 19·93 sq. miles. The area of the city proper is 29·81 sq. miles. Thus, after the inclusion of the added areas, the extent of Greater Madras rose to 49·74 sq. miles.

The population of Madras proper was 7,77,481 according to the Census of 1941. The estimated mid-year population of the city proper for 1946 as furnished by the Public Health Commissioner with the Government of India was 8,46,948. The estimated mid-year population of Greater Madras for 1946 after the inclusion of the extended areas, as furnished by the Director of Public Health, Madras, was 9,53,659.

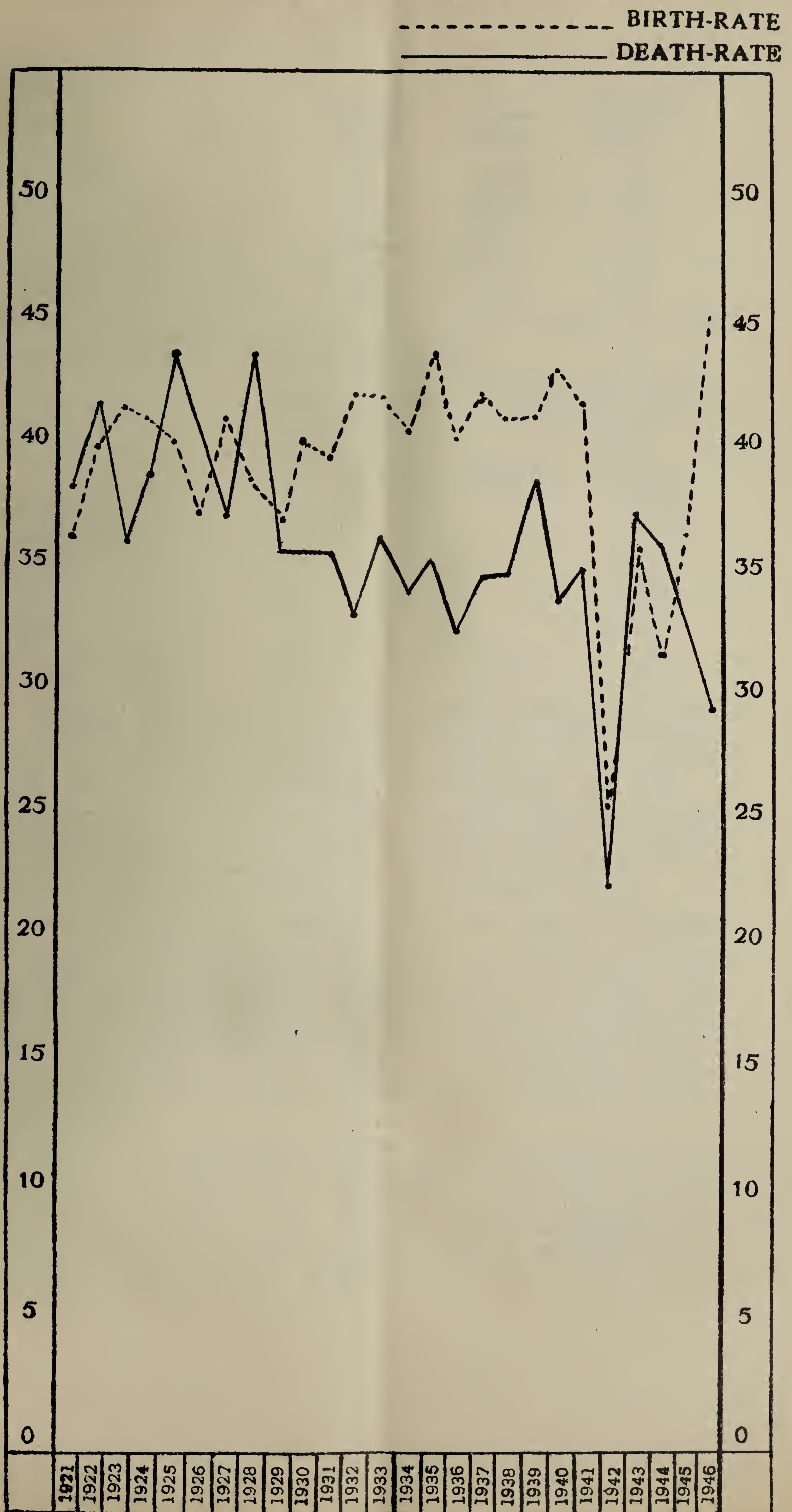
Births :—The total number of births registered in Greater Madras during the year 1946 was 41,874 and a birth-rate of 43·91 per mille of the estimated mid-year population was recorded.

Of the 41,874 births registered in Greater Madras, 21,535 were males and 20,339 females which worked out to 106 male births to every 100 female births.

The total number of births registered in Madras proper during the year was 38,365 with a birth-rate of 45·29 per mille. There were 7,816 births more than those in the previous year which recorded a birth-rate of 36·63 and 10,462 births more than the average birth-rate of 34·55 for the quinquennium, 1941-45. The birth-rate for 1946 is the highest so far recorded in the city.

MADRAS PROPER

BIRTH & DEATH-RATES 1921-46



The number of births registered in each quarter during the year was as follows:—

Quarter	Greater Madras	Percentage to total births	Madras proper	Percentage to total births
1st quarter	7,638	18·2	7,130	18·6
2nd „	9,923	23·7	9,155	23·9
3rd „	12,123	29·0	11,093	28·9
4th „	12,190	29·1	10,987	28·6
Total	41,874	100·0	38,365	100·0

The following statement furnishes the number of births with birth-rates among the chief communities during the year:—

	Number of births registered		Rate per 1,000 Census population in each community	
	Greater Madras	Madras proper	Greater Madras	Madras proper
Europeans	46	44	15·69	
Anglo Indians	527	484	50·36	
Indian Christians	2,380	2,271	49·63	
Muslims	4,276	4,123	43·08	
Hindus	34,625	31,427	50·60	
Others	20	16	6·26	
All communities	41,874	38,365	47·85	49·35

Still-births:—The number of still-births registered in Greater Madras was 1,505 representing a rate of 35·9 of still-births to 1,000 live-births registered. The number of still-births registered in Madras proper was 1,388 against 1,107 in 1945. There were 36·2 still-births to 1,000 live-births registered.

Deaths:—27,381 deaths were registered in Greater Madras during the year with a death-rate of 28·71 per mille of the estimated mid-year population. There were 14,497 deaths among males and 12,884 deaths among females, the number of deaths among males to 100 deaths among females being 113.

The number of deaths recorded in Madras proper during the year was 25,185 against 27,277 in 1945 and 26,615 deaths during the quinquennium, 1941-45. The annual death-rate in Madras proper was 29·74 per mille against 32·71 in the previous year, the quinquennial (1941-45) average rate being 32·92. The death-rate during 1946 is the lowest on record with the exception of the year 1942 when the death-rate declined to 22·67 per mille due to the evacuation of the city on account of war. The proportion of number of deaths among males to deaths among females was 112 to 100 against 114 to 100 in 1945.

An excess of 14,493 births over deaths was recorded in Greater Madras during the year, the rate of natural increase being 15·2 per mille. An excess of 13,180 births over deaths was recorded in Madras proper against an excess of 3,272 births in the previous year. The rate of natural increase was 15·6 per mille of the estimated population in Madras proper, the highest rate to be recorded so far in the city. The rate of natural increase recorded in the preceding year was 3·92 per mille.

The seasonal distribution of deaths in the different quarters of the year 1946 was as follows:—

	Deaths registered		Percentage to total deaths	
	Greater Madras	Madras proper	Greater Madras	Madras proper
1st quarter	6,369	5,907	23·3	23·5
2nd „	6,079	5,604	22·2	22·3
3rd „	7,279	6,650	26·6	26·4
4th „	7,654	7,024	27·9	27·8
Total	27,381	25,185	100·0	100·0

Deaths and death-rates in communities:—The principal communities recorded the following death-rates during the year :—

Community	No. of deaths registered		Rate per 1,000 Census population in each community	
	Greater Madras	Madras proper	Greater Madras	Madras proper
European	13	13	...	4·64
Anglo-Indian	241	211	...	21·96
Indian Christian	1,279	1,214	...	26·53
Muslim	3,048	2,944	...	30·76
Hindu	22,787	20,795	...	33·48
Others	13	8	...	3·13
All Communities	27,381	25,185	31·29	32·40

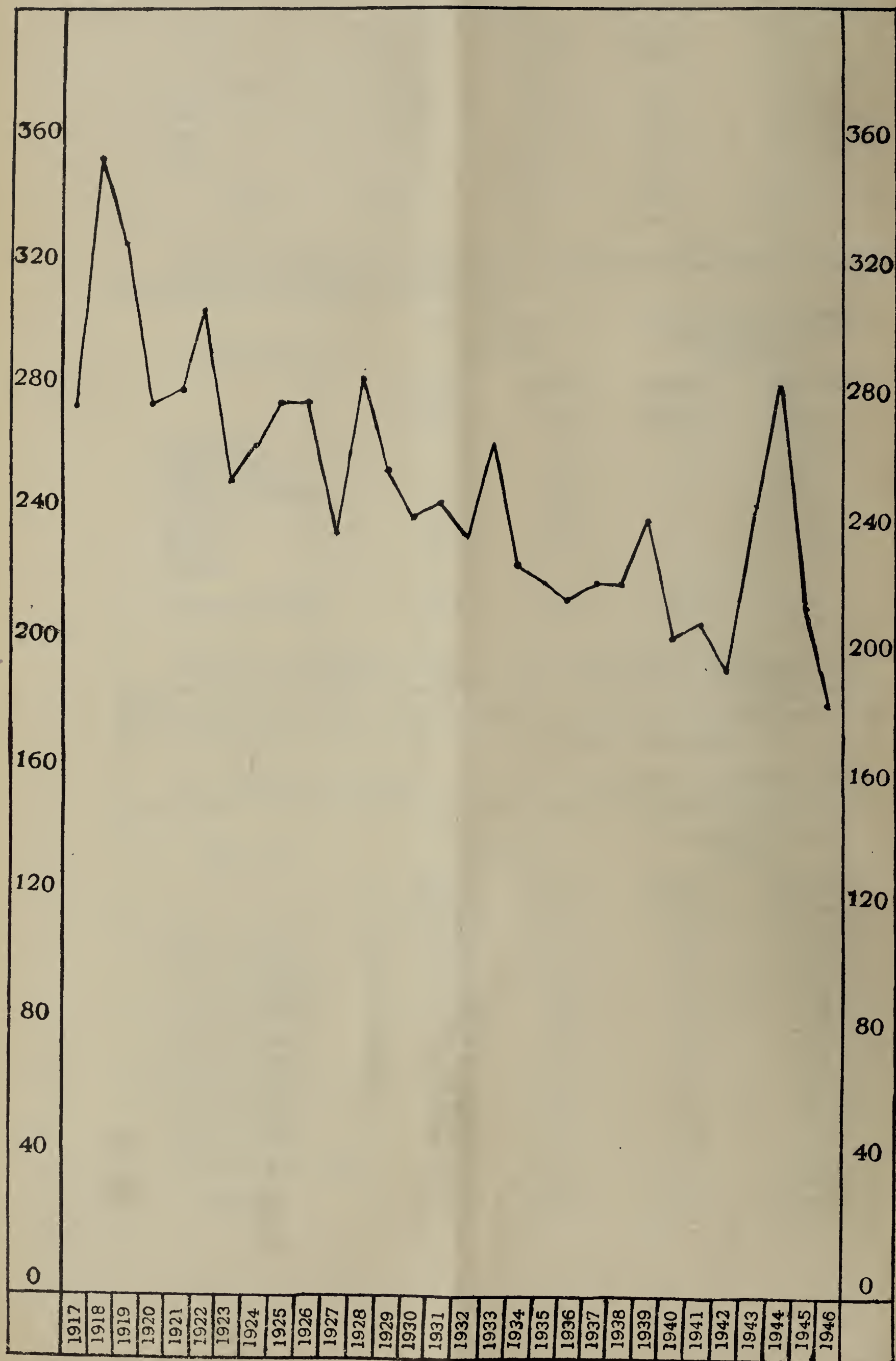
Age and sex distribution of deaths :—Of the total number of deaths (25,185) registered in Madras proper during the year, 13,330 occurred among males and 11,855 among females. The specific death-rates were 30·10 for males and 29·31 for females per 1,000 of the estimated mid-year population.

The statement furnished below gives the number of deaths and the percentage of deaths to the total mortality under the various age-groups :—

Age-group	No. of deaths registered		Percentage to total deaths	
	Greater Madras	Madras proper	Greater Madras	Madras proper
Under 1 year	7,663	7,100	28·0	28·2
1 to 5 years	4,347	4,008	15·9	15·9
5 to 10 years	1,130	1,020	4·1	4·1
10 to 15 years	539	484	1·9	1·9
15 to 20 years	758	694	2·8	2·8
20 to 30 years	2,195	2,019	8·0	8·0
30 to 40 years	2,100	1,931	7·7	7·7
40 to 50 years	2,096	1,943	7·7	7·7
50 to 60 years	1,978	1,811	7·2	7·2
60 years and above	4,575	4,175	16·7	16·5
All ages	27,381	25,185	100·0	100·0

MADRAS PROPER

INFANTILE MORTALITY 1917-1946



Infantile mortality :—7,663 children under one year of age died in Greater Madras during the year. The infantile mortality was 183·00 per 1,000 live-births.

In Madras proper 7,100 children under one year of age died as compared with 6,532 in 1945. The infantile death-rate was 185·06 in 1946 against 213·82 in the previous year, the quinquennial (1941-45) average rate being 230·22. The rate for the year under report is the lowest.

Age and causes of infantile deaths :—The statement furnished below gives principal causes of infantile deaths under different age-groups recorded in Madras proper.

Age-groups	Small-pox	Measles	Malaria	Other fevers	Diarrhoea and Dysentery	Premature birth, Debility, etc.	Nervous system	Respiratory diseases	All other Causes	Total deaths	Percentage to total deaths
Under 7 days	...	...	...	17	38	1,221	41	65	194	1,556	21·9
7 days and under one month	...	...	...	27	58	752	54	138	47	1,076	15·2
1 month and under six months	6	...	...	138	347	315	329	922	588	2,645	37·2
6 months and under one year	11	...	...	107	319	34	134	849	369	1,823	25·7
Total	17	...	...	289	742	2,322	558	1,974	1,198	7,100	100·0

Infantile mortality rates in principal communities :—Infantile deaths and rates among the principal communities in Madras proper for the year 1946 are given below:—

Community	No. of births registered	Infantile deaths	Rate per 1,000 live- births registered in each community
European	44	2	45·45
Anglo-Indian	484	42	86·78
Indian Christian	2,271	322	141·78
Muslim	4,123	881	213·68
Hindu	31,427	5,853	186·24
Others	16	...	...
All Communities	38,365	7,100	185·06

Principal causes of deaths :—The comparative table below furnishes the principal causes of deaths in 1945 and in 1946 with the averages for the previous five years, 1941-45.

Principal causes of deaths	Greater Madras	Madras Proper			
	1946	1946	1945	Increase or decrease in 1946 compared with 1945	Average No. of deaths during the previous 5 years 1941-45
Cholera ...	1	1	30*	—29	143*
Dysentery and Diarrhoea ...	3,010	2,713	3,003	—290	3,222
Small-pox ...	184*	177*	233*	—56	83*
Measles ...	..	...	2	—2	2
Malaria ...	45	37	46	—9	101
Enteric fever ...	107*	97*	126*	—29	139*
Other fevers	2,746	2,440	2,963	—523	2,328
Tubercle including tubercle of lungs ...	405	352	410	—58	394
General respiratory diseases ...	5,878	5,523	6,009	—486	6,330
Injuries ...	291	267	313	—46	248
Deaths from child-birth ...	149	124	155	—31	209
All other causes	14,565	13,454	13,987	—533	13,416
All causes ...	27,381	25,185	27,277	—2,092	26,615

(* Includes deaths among cases admitted from the adjoining district of Chingleput)

It is gratifying to note that there has been in the total mortality a reduction of 2,092 deaths from the number of deaths for the preceding year and of 1,430 deaths from the average number of deaths for the past 5 years, 1941-45.

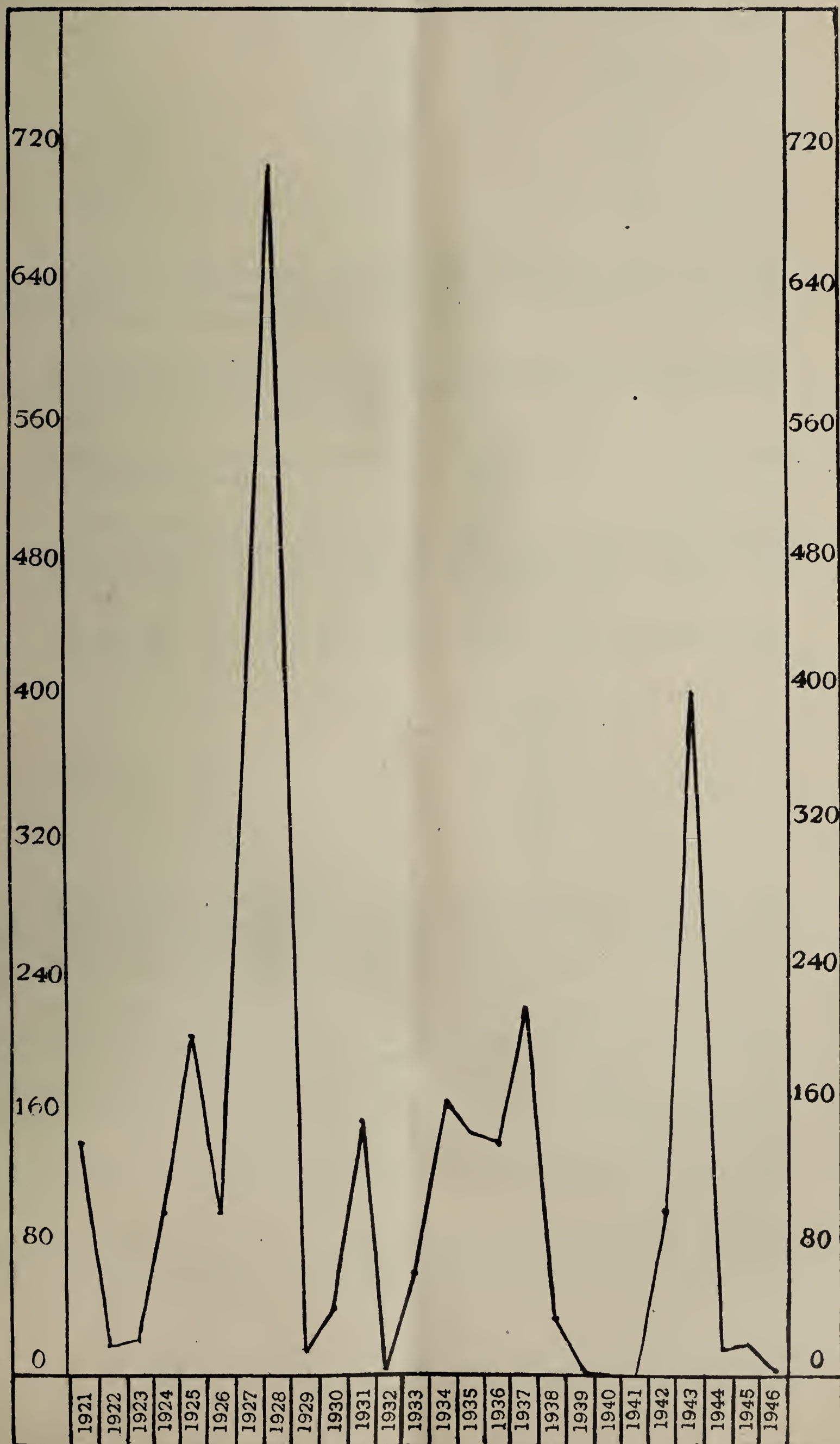
Remarkable decrease under the various causes of mortality has been recorded during the year under report compared with the figures for 1945 as will be seen from the statement furnished above. There has also been a reduction in the infantile mortality rate during the year. The state of public health has therefore been decidedly better than in the preceding year in spite of the unsatisfactory food situation and floods in the last quarter of the year under report.

The causes of deaths are discussed in detail below :

Cholera:—One death from Cholera was reported in Greater Madras during the year with a death-rate of 0·001 per mille. The city of Madras was practically free from Cholera during the year under report. It has been the experience hitherto for Cholera epidemic to break out after un-usual rains and floods. But such an outbreak did not occur inspite of the flood havoc in the year. 2 attacks with 1 death were reported against 59 attacks and 19 deaths in the previous year. The annual death-rate was 0·001 per mille of the estimated mid-year population as compared with 0·02 in 1945, the average

MADRAS PROPER

DEATHS FROM CHOLERA 1921-46



rate for the quinquennium (1941-1945) being 0.13. Both the cases were imported, of which one died.

The number of attacks and deaths reported in the city during the past 5 years and in 1946 is furnished below :—

Year	Attacks	Deaths
1941	3	...
1942	289	90
1943	1,026	400
1944	48	16
1945	59	19
1946	2	1

Preventive measures were adopted in the infected areas and their surroundings. 9,659 inoculations against Cholera were performed among the contacts and other residents in the city.

Diarrhoea and Dysentery :—3,010 deaths were registered in Greater Madras under Diarrhoea and Dysentery during the year with a death-rate of 3.16 per mille of the estimated population.

Diarrhoea and Dysentery accounted for 10.9 per cent of the total mortality in Greater Madras.

In Madras proper 2,713 deaths were registered under these two causes of death as compared with 3,003 deaths in 1945. The death-rate calculated on the estimated population was 3.20 per mille against 3.60 in 1945. The average rate for the past 5 years (1941-45) was 3.99 per mille.

The mortality from Diarrhoea and Dysentery during the last 5 years and in 1946 is given below :—

Year	Deaths
1941	3,838
1942	2,251
1943	3,521
1944	3,498
1945	3,003
1946	2,713

Small-pox :—The prevalence of this disease continued in the city during the year. There were 872 attacks and 169 deaths from Small-pox in Greater Madras with a death-rate of 0.18 per mille of the estimated population. 847 cases or 97% of the total cases were hospitalised.

The number of deaths from Small-pox in Greater Madras accounted for 0.6 per cent of the total mortality. Of these 872 attacks and 169 deaths in Greater Madras, 823 attacks and 162 deaths in Madras proper were registered during the year against 1,049 attacks and 192 deaths in Madras proper in the previous year. Of these 823 cases and 162 deaths in Madras proper 191 attacks and 39 deaths were imported cases and 79 attacks and 9 deaths were among the homeless and destitutes. The death-rate in Madras proper from Small-pox during the year was 0.19 per mille against 0.23 in 1945, the quinquennial (1941-45) average being 0.09.

The number of Small-pox cases admitted into the Infectious Diseases Hospital, Tondiarpet, from the adjoining district of Chingleput for isolation and treatment during the year was 107 of which 15 proved fatal.

Attacks and deaths from Small-pox incidence recorded in Madras proper during the last five years and in 1946 are furnished below :—

Year	Attacks	Deaths
1941	28	5
1942	60	18
1943	65	13
1944	545	123
1945	1,049	192
1946	823	162

Preventive measures were adopted in every infected house and its surroundings. Special staff along with the divisional staff made house-to-house inspections and conducted mass revaccination in the infected areas and in public and educational institutions.

Vaccination :—3,28,743 vaccinations were performed during the year. Of these, 33,517 were primary vaccinations and 2,95,226 were revaccinations.

The following statement furnishes the number of primary vaccinations and revaccinations performed in the city during the past 5 years and in 1946.

Year	Primary vaccinations	Revaccinations	Total
1941	31,995	1,60,483	1,92,483
1942	18,994	70,196	89,190
1943	27,285	99,698	1,26,983
1944	29,732	2,93,673	3,23,405
1945	30,179	3,71,150	4,01,329
1946	33,517	2,95,226	3,28,743

Sanitary Inspectors and Vaccinators, as usual, made house-to-house inspections and pushed on vaccination among unprotected persons.

Medical Officers in charge of dispensaries and Medical Inspectors of Corporation schools also performed vaccinations.

Operations :—33,517 primary vaccinations were performed during the year against 30,179 in 1945. 2,95,226 revaccinations were performed during the year as compared with 3,71,150 in the previous year.

Number of successful vaccinations :—33,314 vaccinations under primary and 8,239 under revaccinations were successful during the year against 29,781 and 9,630 respectively in the previous year. The rate of success in the case of primary vaccinations was 99.90 per cent as compared with 99.65 in 1945 while the success rate in revaccinations was 4.1 during the year against 4.32 in 1945.

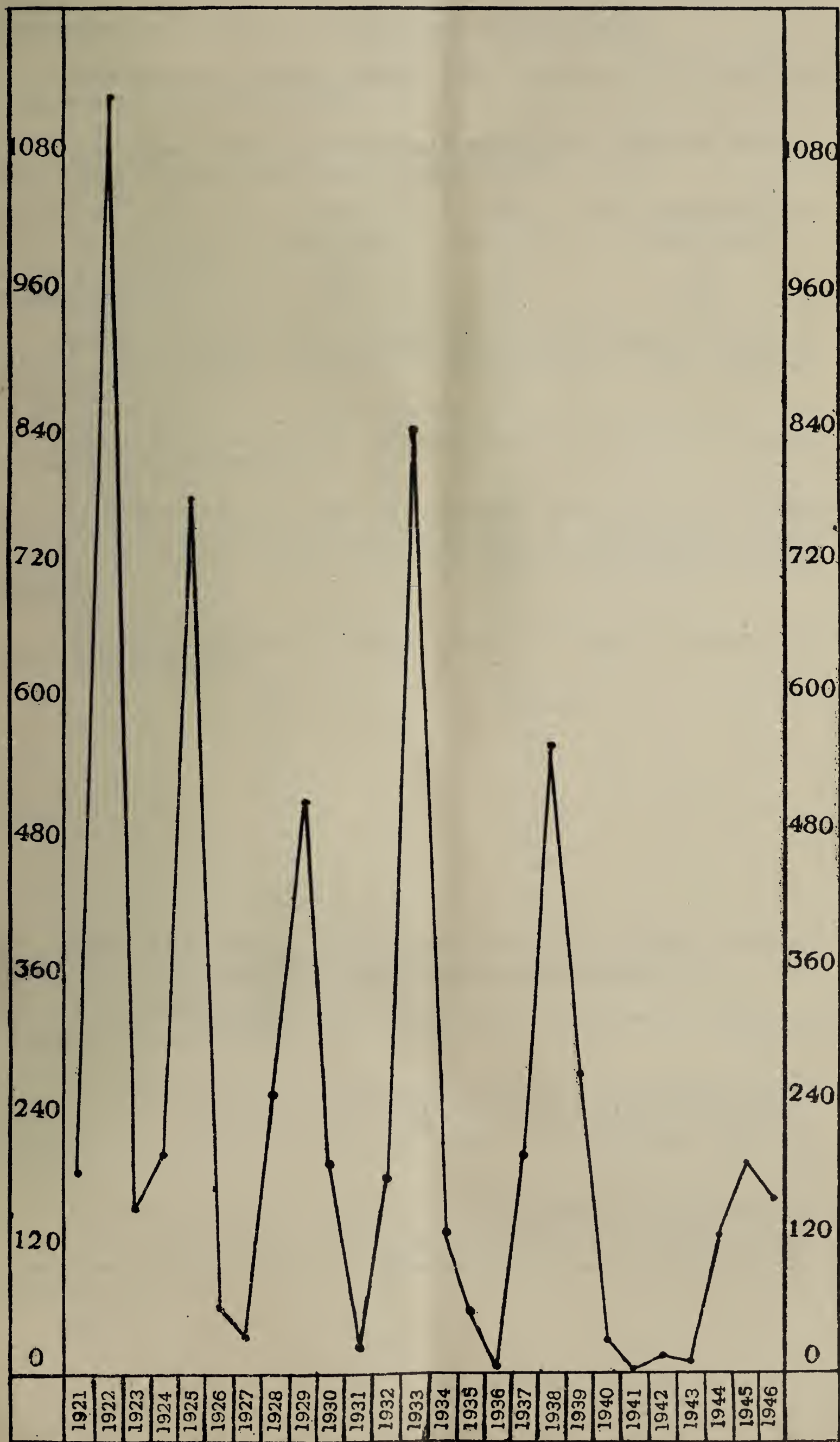
The number of persons successfully vaccinated per mille of the estimated population was 43.6 as compared with 50.7 in 1945.

Infantile vaccinations :—24,570 infants under one year of age were vaccinated during the year against 19,443 in 1945. Of these, 24,434 were successfully vaccinated compared with 19,220 in 1945.

Verification of births :—43,541 births were verified during the year for the purpose of vaccination as compared with 35,062 in 1945. 4,403 children under one year of age died and 8,010 children under one year of age left the city without being vaccinated. Of the remaining children available for vaccination 24,434 infants under one year of age were successfully vaccinated during the year.

MADRAS PROPER

DEATHS FROM SMALL-POX 1921-46



Inspection of vaccinated persons :—The results of vaccinations were verified by the Health Officer, the Asst. Health Officers and the Medical Officers in charge of Registration and Vaccination. The results of 22,836 primary vaccinations and 84,246 revaccinations were verified by them.

Postponement of vaccination of children :—The vaccination of 962 children was postponed on medical grounds.

Prosecutions :—542 prosecutions were conducted for refusal of vaccinations during the year under report as detailed below :—

	No prosecuted	No. convicted	No. vaccinated after prosecution
Primary Vaccination ...	93	57	77
Revaccination ...	449	351	395

Malaria :—45 deaths from Malaria were registered during the year in Greater Madras with a death-rate of 0·05 per mille of the estimated population.

The deaths from Malaria accounted for 0·16 per cent of the total mortality in Greater Madras.

In Madras proper 37 deaths were registered against 46 in 1945. The death-rate calculated on the estimated population was 0·04 per mille in 1946 against 0·06 in the previous year, the quinquennial (1941-45) average being 0·06.

Mortality from Malaria in Madras proper for the past 5 years and for 1946 is furnished below :—

Year	Deaths
1941	30
1942	27
1943	67
1944	82
1945	46
1946	37

Enteric :—107 deaths were registered from Enteric fever in Greater Madras with a death-rate of 0·11 per mille of the estimated population

Deaths from Enteric fever accounted for 0·4 per cent of the total mortality in Greater Madras.

In Madras proper 503 attacks and 87 deaths were registered during the year against 424 attacks and 95 deaths in the previous year. The death-rate was 0·10 against 0·11 in 1945 while the quinquennial (1941-45) average was 0·14.

64 cases were admitted into the various hospitals and institutions in the city from the adjoining districts for treatment and 10 of them proved fatal during the year against 31 deaths among 102 cases admitted in the previous year.

The following statement furnishes the incidence of Enteric fever in Madras proper during the last 5 years and for 1946.

Year	Attacks	Deaths
1941	825	206
1942	679	128
1943	658	90
1944	503	66
1945	424	95
1946	503	87

Preventive measures were promptly adopted in every case that was notified. 7,966 inoculations against Typhoid were performed in the city during the year.

Other fevers :— 2,746 deaths from other fevers were registered in Greater Madras during the year with a death-rate of 2.88 per mille of the estimated population. The deaths under this group accounted for 10.03 per cent of the total mortality in Greater Madras.

In Madras proper 2,440 deaths were registered during the year against 2,963 deaths in 1945. The death-rate was 2.88 per mille of the estimated population against 3.55 in 1945 and 2.87 which is the quinquennial (1941-45) average.

The following statement furnishes the mortality from other fevers in Madras proper during the past 5 years and in 1946.

Year	Deaths
1941	2,302
1942	1,341
1943	2,345
1944	2,687
1945	2,963
1946	2,440

Tuberculosis :— 405 deaths from Tubercle including Tubercle of lungs were registered in Greater Madras during the year with a death-rate of 0.42 per mille of the estimated population. Deaths under Tuberculosis accounted for 1.3 per cent of the total mortality in Greater Madras.

In Madras proper 352 deaths with a death-rate of 0.42 per mille were registered against 410 deaths with a death-rate of 0.49 in 1945, the quinquennial (1941-45) average being 0.49.

The Corporation Tuberculosis Clinic at Pulianthope and the Government Tuberculosis Institute at Egmore notified all cases that came under their care and treatment. These cases were immediately referred to the divisional Sanitary Inspectors who were instructed to keep a close watch on the patients and their immediate contacts and to advise them on the need to check the infection.

The report on the working of the Corporation Tuberculosis Clinic at Pulianthope is furnished separately.

General respiratory diseases :— 5,878 deaths were registered under this cause in Greater Madras during the year with a death-rate of 6.16 per mille of the estimated population.

21.5 per cent of the total mortality occurred under general respiratory diseases in Greater Madras during the year.

In Madras proper, 5,523 deaths were registered during the year against 6,009 in 1945. The death-rate was 6.52 per mille of the estimated population against 7.21 in 1945 and the quinquennial average of 7.83 for the previous 5 years (1941-45).

The mortality statistics from general respiratory diseases in Madras proper during the preceding 5 years and in 1946 are furnished below :—

Year	Deaths
1941	6,523
1942	4,093
1943	7,857
1944	7,166
1945	6,009
1946	5,523

Deaths from injuries :—291 deaths from injuries were registered in Greater Madras during the year with a death-rate of 0.31 per mille of the estimated population.

Deaths from child-birth :—149 mothers died after child-birth in Greater Madras during the year. The maternal mortality rate was 3.56 per 1000 live-births registered. Maternal deaths represented 0.5 per cent of the total mortality in Greater Madras.

In Madras proper 124 mothers died of child-birth against 155 deaths in 1945. The maternal mortality rate was 3.23 in 1946 as compared with 5.07 in 1945.

The maternal deaths registered in Madras proper during the year are classified below according to age-groups and principal causes of death.

Principal causes of death	Deaths in age-groups				Total deaths	Percentage to total deaths
	15-20 years	20-30 years	30-40 years	40 years and above		
Puerperal Sepsis ...	12	33	15	...	60	48.39
Abortion ...	1	2	2	1	6	4.84
Other accidents and diseases of pregnancy	14	24	15	5	58	46.77
Total ...	27	59	32	6	124	100.00

The statistics relating to the deaths of mothers who came under the care of the various clinics of the Corporation Child Welfare Scheme are given in a separate report by the Lady Superintendent, Child Welfare Scheme.

Deaths from "Other causes" :—14,565 deaths from "Other causes" were registered in Greater Madras during the year with a death-rate of 15.27 per mille of the estimated population. 53.2 % of total mortality account for deaths from this group of causes.

In Madras proper 13,454 deaths from "Other causes" were registered during the year compared with 13,987 deaths in 1945. The death-rate calculated on the estimated population was 15.89 per mille against 16.77 in 1945 and the quinquennial (1941-45) average of 16.59.

Certified deaths :—3,540 deaths were certified by the various hospitals and institutions in the city and 506 deaths by private medical practitioners as to the causes of deaths. The certified deaths represented 15% of the total deaths compared with 17% in 1945. Medical Officers in charge of Registration of Births and Deaths verified the causes of the other deaths.

MEDICAL RELIEF

Free medical aid was rendered through 28 general dispensaries, 2 leprosy clinics, 1 venereal clinic and 1 tuberculosis clinic. The general dispensaries situated in different parts of the city consisted of the following :—

- (1) 20 Allopathic dispensaries
- (2) 4 Unani „
- (3) 3 Siddha „
- (4) 1 Ayurvedic dispensary

These institutions treated cases of minor ailments especially among the poor and recorded a total attendance of 18,04,939 cases of which 9,11,371 were new cases. The number of skin cases treated was 1,76,215 and the number of minor operations performed was 6,164. The distribution of milk to priority consumers started in the Chintadripet, Teynampet and Mylapore dispensaries from 7-11-1945 and in Mafuskhan, Mint, Vyasarpady, Kosapet, Otteri, Choolai, Egmore and Thousand Lights dispensaries from December, 1945, was continued throughout the year.

In the Venereal Clinic, Otteri, a total number of 22,347 cases underwent treatment during the year. A total of 6,047 injections were given and 1,421 specimens of blood were sent to the King Institute, Guindy, for serological examination. Minor operations such as dorsal splitting and circumcision were also performed.

New cases treated during the year numbered 3,070 consisting of 2,001 males and 987 females and 82 children. Cases are classified below according to diseases.

	Syphilis	Gonorrhoea	Lympho Granuloma	Infective Granuloma	Chancroid or Soft sores	Yaws	Combination of 2 or more V. diseases.	Genital le- sions of non- venereal origin
Males ...	465	387	21	4	74	1	47	1003
Females ...	370	272	25	...	...	...	49	271
Children ...	59	5	...	...	...	...	...	17
Total ...	894	664	46	4	74	1	96	1,291

The Health Visitor who was appointed made 367 visits and 766 re-visits to patients in their homes and she succeeded in inducing 238 patients to resume the treatment discontinued by them before complete cure was effected.

60 cases of repeated abortions and suspected of latent Syphilis were referred for examination and treatment from Child Welfare Centres. As latent Syphilis causes frequent abortion among women suffering from it, its detection and treatment at the clinic is an important service.

'Sulphathiazole' was the main drug used in the treatment of gonorrhoeal cases and has been found to be very effective. But 62 cases proved sulphonamide-resistant and 30 of them were treated with *penicillin* with beneficial results in 23 cases. *Sulphathiazole* produced equally good results in the treatment of 74 cases suffering from Chancroid. 46 cases of Lympho Granuloma were also treated with *Sulphathiazole*. The treatment was successful in 24 cases. In 14 cases Buboos had to be aspirated in addition to *Sulpha-*

thiazole therapy. 9 cases failed to take continuous treatment. 'Anthio-maline' was used for treating cases of Infective Granuloma. As the 4 patients suffering from it stayed away without undergoing the complete course of treatment, the results could not be assessed. A solitary case of secondary Yaws was given 4 injections of arsenic. Just as the lesions began to heal, the patient discontinued the treatment.

Skin and Leprosy Clinic, Ice House Road, recorded a total attendance of 47,479 cases of which 204 were new cases of Leprosy and 15,163 were new cases of skin and other diseases. There was a slight fall in the total attendance as the treatment of cases other than skin diseases and Leprosy was further cut down. 5,090 injections for Leprosy and 1,263 injections for skin diseases were performed.

Among the new skin cases 1,525 were new cases of Scabies. It is gratifying that there has been a substantial fall in the incidence of Scabies during the year under report.

59 suspected cases from Corporation schools came for examination and treatment. 37 of these cases had neural type of Leprosy while 12 cases were definitely free from it. 10 cases proved to be doubtful requiring further observation. The pupils diagnosed as having Leprosy were given suitable treatment. They had 574 injections and adjuvants to improve their general state of health.

In the Skin and Leprosy Clinic attached to the general dispensary at Vyasarpady there was a total attendance of 6,922 cases of which 99 were new cases of Leprosy and 1,926 were new skin cases. The total number of injections given in the treatment of these cases was 3,307.

The results of the Leprosy cases treated in the two clinics are set forth below :—

	No. Improved	No. Symptom free	No. Arrested	No. Otherwise	Total
Skin and Leprosy Clinic Ice House Road	110	12	8	74	204
Skin and Leprosy Clinic Vyasarpady	19	1	4	75	99

In the Tuberculosis Clinic at Pulianthope there was a total attendance of 23,711 cases of which 4,712 were new cases. 3,663 Fluoroscopic examinations and 497 Radiographic examinations were done with the X-Ray apparatus. 2,227 sputum examinations and 250 blood smear examinations were done in the laboratory. The number of positive sputum for Tuberculosis was 647. 45 cases received A. P. treatment regularly and 387 A.Ps. (Initials and Refills) were given during the year under report.

644 cases had Pulmonary Tuberculosis including Pleurisy with effusion and 233 cases had Non-pulmonary Tuberculosis consisting of glandular Tuberculosis and bone Tuberculosis.

644 cases diagnosed as Pulmonary Tuberculosis are classified below according to sex, age, community and divisions in the city.

	Males 443				Females 201			Total 644	
Age period	0 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	21 to 25 years	26 to 30 years	31 to 35 years	36 to 40 years	Above 40 years
No.	3	4	10	65	135	139	111	60	117

	Hindus	Muslims	Christians	Total
	547	80	17	644

Divn.	Pulian- thope	Chulai	Purasa- walkam	Perambore	Otteri	Washer- menpet	Other Divns.	Total
No.	131	97	59	61	27	43	226	644

435 mill hands came for examination and 91 of them had Tuberculosis requiring isolation and treatment.

Most of the diagnosed cases were *bilateral* and required isolation and symptomatic treatment. 61 cases were sent to the Sanatorium at Tambaram from January to June. After June no cases could be sent as the sheds accommodating the 50 beds set apart in the Sanatorium for patients from this clinic had been out of service. 127 of the diagnosed cases died before the end of the year.

Every case diagnosed as Pulmonary Tuberculosis was notified to the divisional Sanitary Staff for taking preventive measures. The Health Visitor visited 1,492 times the homes of the patients for ensuring their regular treatment and inducing the contacts to undergo examination and treatment at the clinic.

The number of contacts examined was 780 of which 19 were positive cases requiring treatment. 133 cases of enlarged glands were attended to with benefit.

The lack of bed provision for cases needing institutional treatment is a serious handicap in effectively dealing with Tuberculosis. The construction of the Tuberculosis Hospital in Kunur Road by its donor, Rao Sahib Sri T. P. Ramasamy Pillai, was proceeding apace. The opening of this hospital will partially supply a dire need in the city.

In the Infectious Diseases Hospital at Tondiarpet a total of 3,711 cases were treated of which 3,579 cases were admitted during the year under report. 1,654 of the admissions were for Chicken-pox, 112 were for Measles and 943 were for Small-pox. The number of Cholera cases admitted was 2 only. 3,399 cases were cured and discharged and 273 cases died before the end of the year. The mortality rate for all causes was 7.4 per cent.

A Public Health Laboratory provided with facilities for undertaking clinical pathological work, was opened on 2-7-1946. It is located on the top-floor of the Public Analyst's Laboratory behind the Ripon Buildings. A Pathologist assisted by a Technician is in charge of the Laboratory. While sputum examination for tubercle bacilli is done free, a nominal fee is charged for the examination of other specimens from individuals whose income exceeds Rs. 100 per mensem.

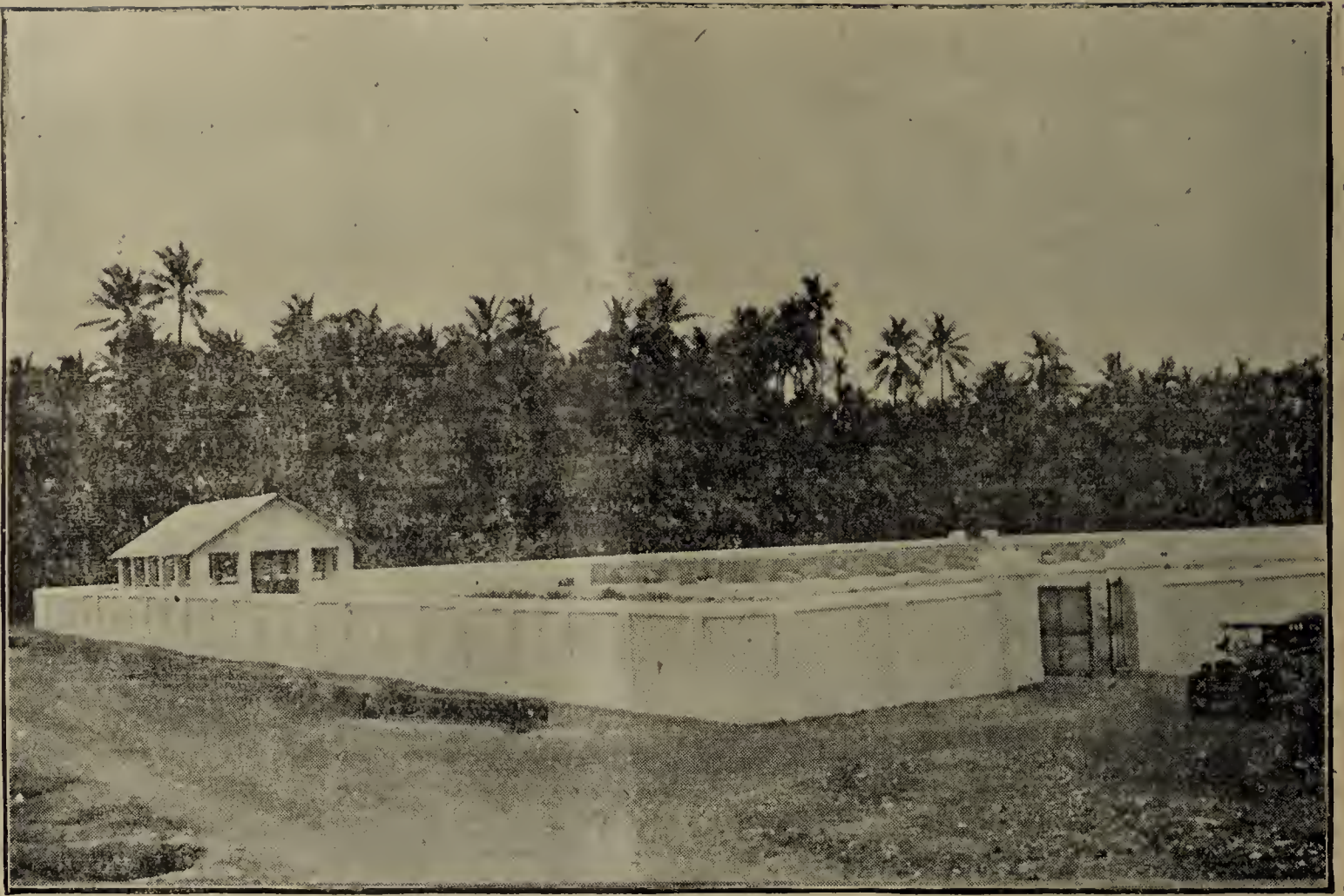
Before the year under review came to a close the total number of specimens examined was 575 of which 162 were received from the Corporation dispensaries. Besides 206 blood smears examined for total counts, R.B.C. and W. B. C. differential count, H. B. estimation and Malarial parasites, examination of cervical smears, ear-puncture smears, faeces, sputum and urine was also done.



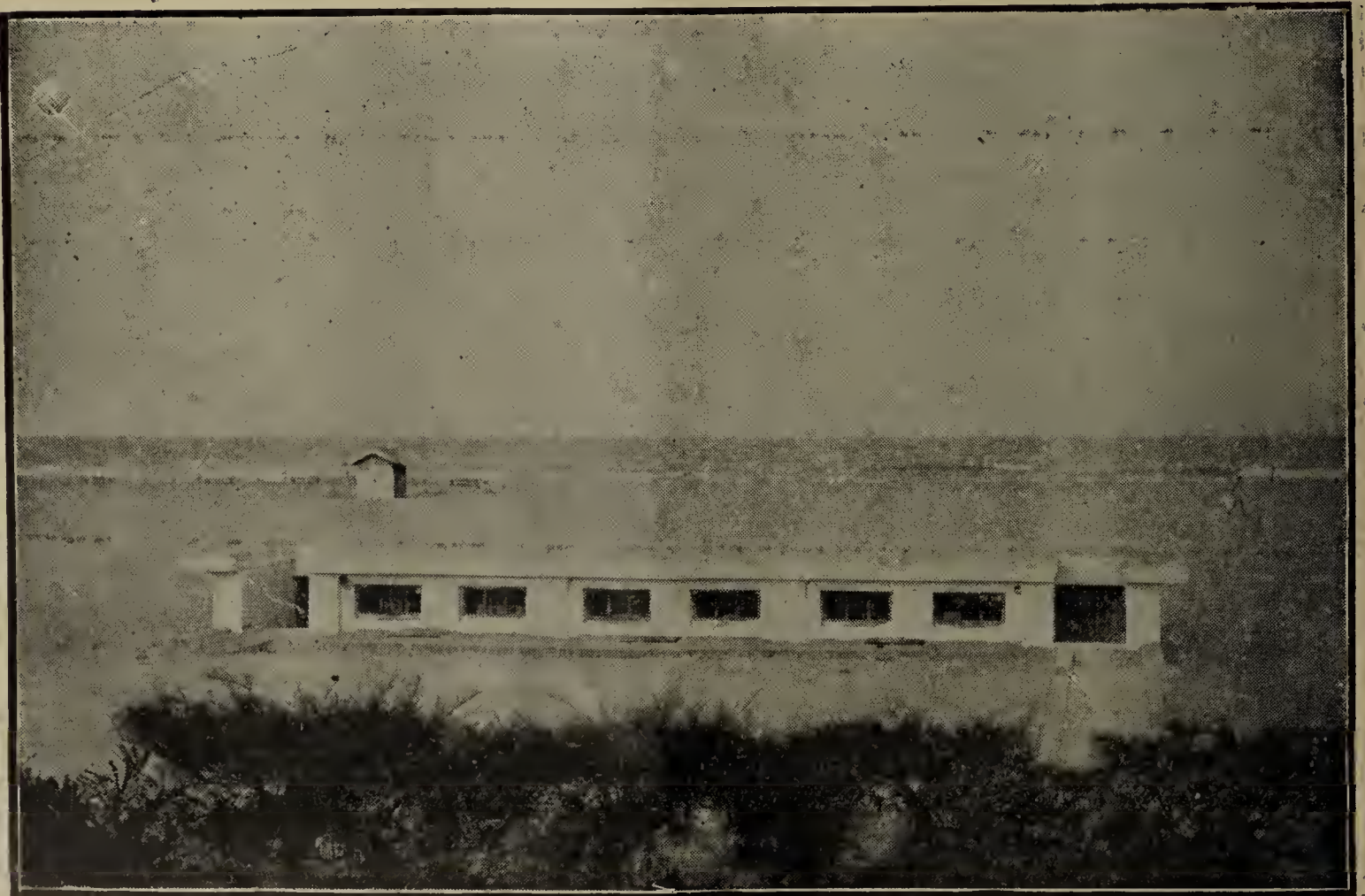
Tiruvoteeswarar Tuberculosis Hospital, Konnur High Road
(Newly opened)



Public Health Laboratory and Food Analysis Laboratory
behind the Ripon Buildings



Dhobykhana in Suryanarayana Chetty Street, Royapuram
(Newly constructed)



Public convenience (semi-underground type) in Marina
(Opposite the Office of the I.G. of Police)

MEDICAL INSPECTION OF CORPORATION SCHOOLS, 1946-47

Staff:—As in the previous year seven Medical Inspectors and three Medical Inspectresses worked during the year.

The routine of work:—The Medical Inspectors continued to treat the defective children examined by them in the after-noons with the help of the first aid trained teachers. Cod liver oil, yeast and other drugs necessary for treatment of minor ailments were stocked at a central place in the Corporation Boys' School, Lawder's Gate Road, from where necessary drugs in required quantities were supplied to the schools on the advice of the Medical Inspectors.

Out of 173 schools, the Medical Inspection Staff inspected 133 schools including those in the extended areas of the city. The total number on rolls in these schools was 22,376 boys and 15,798 girls and the average attendance in them was 16,821 boys and 11,929 girls. 18,326 boys and 12,210 girls were examined at these inspections. 8,355 boys (45.59%) and 4,686 girls (38.38%) were defective and required medical attention. They were treated by the Medical Inspectors.

Personal hygiene:—1,585 boys (8.65%) and 109 girls (0.89%) were dirty in their person and clothing. They were made to bathe in the schools. Some of them had skin affections and were treated after the baths.

Malnutrition and catarrhal conditions:—3,652 boys (19.93%) and 1,420 girls (11.63%) were undernourished against 21.43% and 5.89% respectively in the previous year. 2,570 boys (14.02%) and 776 girls (6.36%) had dental and oral complaints. 1,877 children had stomatitis and were treated at the schools with benefit. 81 had their caries teeth extracted. 1,930 children had enlarged tonsils and 50 among them had their offending tonsils removed by operation. Six children had their defects of vision corrected by wearing glasses. 247 children received treatment for discharge from the ear. Four were defective in hearing and were provided seats close to teachers. 26 children were having defects of speech.

As in the previous year cod liver oil and calcium lactate were administered to 5,492 ill-nourished children and others having vitamin deficiencies. 1,696 children having stomatitis were given yeast along with their midday meal. They were greatly benefited by such treatment.

Circulatory and respiratory diseases:—141 boys (0.77%) and 132 girls (1.08%) had defects relating to heart and blood. 154 anaemic children were much improved by treatment. Three children had enlarged spleen due to Malaria and they were suitably treated.

Diseases of bones and joints and nervous system:—820 children had deformities of chest due to rickets in their childhood. 27 children had infantile palsies and functional disorders of nerves. All of them were suitably treated.

Infectious and contagious diseases:—1,732 boys (9.45%) and 1,189 girls (9.74%) had infectious diseases, the corresponding figures for the previous year being 11.06% and 12.62% respectively.

1,800 children suffering from scabies were given daily bath and treatment in the schools. 1,191 of these children were cured of their ailment. 564 children were having signs and symptoms of leprosy in its early stages. They received appropriate treatment. In three children there was good improvement and they became almost symptom free. 89 improved after treatment.

General preventive work :—5,306 children were protected against small-pox by revaccinations. 2,996 were inoculated against Cholera and 411 against Typhoid.

Other diseases :—22 children underwent circumcision operation for Phimosis on medical advice.

Medical treatment :—Most of the defects in the children related to malnutrition, vitamin deficiencies and infectious skin conditions and were treated by the Medical Inspectors themselves at the schools in co-operation with the school staff. 10,410 school children have been treated at the schools for the above ailments and were benefited. Only 1,051 children had to be sent to Corporation dispensaries for treatment of certain ailments which could not be dealt with at the schools. 1,951 were sent to the Government General Hospital for treatment of certain serious ailments.

Re-inspections :—687 re-visits were paid to the schools after the routine inspections for the treatment of the defectives and 36,434 re-examinations of children were conducted during these re-visits.

Co-operation of teachers and parents :—2,921 parents of defective children were present at the school during the inspection and treatment of their children. The details of medical attention bestowed on their children were explained to them and their co-operation was sought in this respect. The school staff made efficient arrangement for the treatment of defectives and the good results obtained were due to their interest in the work. As in previous years special attention was bestowed on the treatment of leper children.

School sanitation :—Three school buildings were found unsuitable for school purposes. In the case of forty schools improvements to the buildings were suggested. 116 of the schools had flushout latrines, 49 schools required playground facilities. Proper water supply has been provided for in all the schools. Strained tap-water was used as drinking water by the children. 47 schools had bathing facilities.

Midday meal :—On and from 1-4-1946, the Health Department took over the control of the Midday Meal Centre. In 131 schools 7,473 children were provided with midday meals on school working days. Serving of rice and *sambhar* was resumed from 20-2-1947.

Propaganda :—167 lectures and 217 talks on health subjects were arranged in the schools. The total attendance at these lectures and talks was about 25,500.

Milk supply :—In March 1946 a comprehensive scheme for the supply of milk to the poor children studying in the Corporation schools was prepared and placed before the Standing Committees and Council for sanction. A copy of the scheme was forwarded to the Commissioner of Civil Supplies, Madras. The Government in G. O. No. M. S. 140 Food Department dated 30-3-1946 ordered the utilisation of the milk surrendered by the Military authorities for the purpose and supplied about 1,800 measures of this milk free of cost.

The free distribution of milk to the school children was commenced from 1-4-1946. The Corporation schools were divided into 10 zones, the schools in the first 5 zones receiving the supply in the forenoons and the schools in the remaining 5 zones receiving it in the afternoons for distribution. Each deserving pupil was given an ollock per day.

During the summer vacation which commenced from 6-5-1946 the milk intended for the Corporation children was diverted by the Government to

charitable institutions. The free distribution was resumed in the schools on their reopening on 17-6-1946. As only 1,000 measures of milk were available after the re-opening, each pupil was given $\frac{1}{2}$ an oblock of milk. As the quantity was further reduced to 700 measures, the distribution had to be restricted to children in the Corporation schools situated in poor localities. This scheme was discontinued from 1-8-1946 and the milk diverted, with the approval of the Government, for distribution to priority consumers.

In G. O. No. M. S. 831 dated 1-10-1946 the Government sanctioned the free supply of milk reconstituted from skimmed milk powder to Corporation school children who were not given midday meals. They allotted 635 cases of 50 lbs. of milk powder each and milk reconstituted from this milk powder was distributed to about 12,000 pupils studying in the Corporation schools during the months of December, 1946, and January and February, 1947.

SANITATION

The late Rao Bahadur Dr. C. S. Govinda Pillai was the Health Officer of the city till his death on 11-5-1946 after a brief illness. Dr. P. Sadasivan succeeded him. The Council in its proceedings dated 27-6-1946 and the Government in their G. O. Mis. No. 2240 Edn. and P. H. dated 27-7-1946 approved of his appointment as the permanent Health Officer.

The Sanitary Staff had to face 2 difficult situations during the course of the year under report. The sanitation of the city was greatly endangered when the conservancy labourers struck work from 13-8-1946 to 3-9-1946. The steps taken to deal with the strikers and to carry on the work of conserving the city are dealt with in detail in the report on conservancy. The health of the city was once again jeopardised when heavy rains in the last quarter of the year flooded the low-lying parts of the city. Due to incessant rains the floods did not subside quickly. With the Corporation schools close to the flood stricken areas as refuge centres, relief measures were speedily organised and carried out. People stranded in the floods were rescued and those rendered homeless were accommodated and cared for in these schools. The Council sanctioned a sum of Rs. 1,400 for affording relief. Food was prepared in the Midday Meal Centre, conveyed in the food vans and distributed at the relief centres. The Health Department was in charge of the arrangements made for the shelter and feeding of the refugees. The Sanitary Staff also paid special attention to the cleansing of the slum areas to prevent the outbreak of any infectious disease.

The division of the city into 4 ranges with an Assistant Health Officer in charge of each continued to be in force till 31-3-1946. After the extension of the city by the inclusion of the areas of the defunct Saidapet Municipality, defunct Aminjikarai and Sembiam Panchayat Boards and parts of Chingleput District Board the city was divided into "city proper" and "added areas" and a fifth Assistant Health Officer and a Sub-Assistant Health Officer were appointed. The city with the extensions was then divided into 5 ranges with an Assistant Health Officer in charge of each range and the Sub-Assistant Health Officer was placed in charge of Saidapet and Kodambakkam areas.

Sewers :—The work of sewer laying made good progress during the year under report. 27,226 feet of sewers were laid in Theagarayanagar, 4,517 feet in Purasawalkam, 2,968 feet in Greams Road area, 2,669 in Perambore, 1,051 feet in Tondiarpet, 719 feet in Royapuram and 269 feet in Vyasarpady. The total length of sewers laid was 39,419 feet against 18,447 feet in 1945.

2,359 flushout latrines were installed in private houses in the city. 1,945 of them were constructed by the Special Works Department and the rest were constructed by licensed plumbers.

Housing :--721 plans for the construction and reconstruction of buildings were received for scrutiny. 177 of these plans were rejected for sanitary reasons. In the case of 469 plans for houses in sewered areas, the provision of flushout latrines was insisted upon.

310 houses were newly constructed and 261 of these houses were provided with flushout latrines. The other houses were situated in unsewered areas and had masonry latrine accommodation.

17,421 houses were inspected by the Sanitary Staff and the following defects were noticed in them :--

1. Want of proper drainage in 685 houses
2. Want of proper latrine accommodation in 789 houses
3. Defective water supply in 542 houses
4. Bad ventilation in 730 houses
5. Miscellaneous defects in 1,005 houses

3,901 notices were issued to rectify these defects and 341 prosecutions were launched for failure to comply with the terms of the notices served. As a result of the action thus taken 3,036 houses were repaired and improved. 1,229 houses were inspected by the Sanitary Staff on receipt of complaints.

Offensive trades :--17,334 applications for licences to run offensive trades were received and dealt with during the year under report. 16,356 of these applications were sanctioned and 961 refused for sanitary reasons. 319 prosecutions were launched for carrying on offensive trades without licence, and in 117 cases similar proceedings were instituted for contravening the conditions of licence.

66 lodging houses were registered under the Public Health Act. All the lodging houses so registered were provided with the necessary sanitary amenities.

There were 872 licensed cattleyards at the beginning of the year. 364 cattleyards were not licensed. 839 notices were issued to effect sanitary improvements and 548 prosecutions launched for failure to comply with the terms of the notices served. The closure of 166 cattleyards was effected as a result of the action taken against the owners.

The cattleyard at Basin Road was placed at the disposal of the Madras Co-operative Milk Supply Union for housing cows and buffaloes. It was the main centre from which milk to priority consumers was being supplied. The cattleyards at Chintadripet and Triplicane were maintained in a sanitary state. The cattleyard at Purasawalkam was kept at the disposal of the Madras Co-operative Milk Supply Union for housing the herd of its members.

The dhobykhanas at Robinson Park, Conransmith Nagar, Venkatathri Naickan Street and Chetpet functioned satisfactorily. Major improvements were effected to the dhobykhana at Robinson Park. The construction of a new dhobykhana in Washermenpet was commenced during the year under report. The proposal to provide dhobykhanas in Vyasarpady, Perambur, Egangipuram were postponed on account of paucity of funds and non-availability of suitable sites.

Food control :—All the public and private markets were periodically inspected by the divisional Sanitary Inspectors to ensure their sanitary upkeep. The owners of private markets were required to do annual repairs.

and limewashing besides effecting improvements wherever necessary. Licence to run the private market in Rasappa Chetty Street was refused and this market was consequently closed from 1-4-1946.

In Fruit Market the frontage of the stalls facing the quadrangle was widened and partition walls constructed between the stalls. In Moore Market the construction of the vegetable gallery was completed and the vegetable stalls were shifted there. The washing platform of the newly constructed vegetable stalls was provided with water taps.

Meat supply :—In the 3 Slaughter Houses, 5,10,635 animals were brought for slaughter and 5,02,657 animals were slaughtered. The other animals were found to be either unhealthy or serviceable as milch cattle or draught animals and were therefore not permitted to be slaughtered. In the following statement details of animals brought and slaughtered are furnished :—

	No. of animals brought for slaughter	No. of animals slaughtered	No. of animals rejected
Sheep and Goats ...	4,77,848	4,71,058	6,790
Cattle ...	29,858	28,672	1,186
Pigs ...	2,929	2,927	2

The number of cattle in a fit condition for further work or breeding and prevented from being slaughtered is given below :—

Cows	Bulls	She-buffaloes	He-buffaloes	Heifers	Total
709	18	447	24	109	1307

The carcasses of the slaughtered animals were examined and the diseased meat and organs were destroyed as stated below :—

	No. of carcasses condemned	Reasons	No. of organs condemned	Reasons
Sheep and Goat ...	5	Anthrax infection	12,792	Parasitic and Inflamed
Cattle ...	...	...	11,311	do.
Pigs ...	8	Measly	1,146	do.

Arrangements were made during the year for establishing a Veterinary Clinical Laboratory for examining pathological specimens of blood of slaughtered animals and faeces and urine of the conservancy animals.

Weights and measures :—All public and private markets, rice ration shops, sugar ration shops, firewood ration shops, kerosene ration shops, cloth shops and other shops were periodically inspected and the weights, measures and scales in use in such places examined and checked. Street hawkers were also intercepted and the weights, measures and scales used by them scrutinised and tested.

In all the markets and shops the merchants were found to use standard weights, measures and scales duly tested and stamped. But a tendency on the part of rice ration shopkeepers to allow bran to adhere in thick layers to the bottom and sides of the measures was noticed. They were therefore required to clean them constantly. In 19 cases where the shopkeepers failed to do so, the measures were seized and confiscated. In sugar ration shops merchants were found to use weights for counterpoising the

weights of receptacles used for holding sugar. As this facilitated fraudulent use of weights, they were required to use counterpoises which cannot be easily tampered with. The weights of such counterpoises were frequently verified with those of the receptacles used. 42 weights used as counterpoises contrary to instructions were seized and confiscated. Instances of under-measurements were frequently met with in the kerosene ration shops. To prevent this fraud practiced with impunity by the kerosene vendors the Inspectors of Weights and Measures besides making check-measurements correctly measured quantities of oil given as ration and instructed the purchasers to stick paper labels to indicate the proper level of oil when correctly measured.

Mutton vendors were often found to cheat the unwary public by the fraudulent use of palam weights for selling mutton in seers. To check this malpractice among the vendors, check-weighments of quantities of mutton sold in seers were made. The mutton vendors were also required to suspend their balances in such a manner as to enable the buyers to have a good view of the pans of the scales as well. 17 scales which were not kept in this manner were seized and confiscated.

Street hawkers were found to use weights and measures tested and stamped in the mofussil areas. This often necessitated their verification with the help of the working standard weights and measures in the possession of the Inspectors of Weights and Measures. The measures of curd vendors were generally found to be defective and therefore seized and confiscated. As they were found to use cocoanut shells for purposes of measuring after the defective measures had been seized, such improvised shells were also seized.

842 measures, 716 weights, and 316 scales were found defective and they were seized and confiscated.

In the added areas copies of the by-laws were distributed to the shopkeepers and other vendors. They were also informed by beat of tom-tom to replace the wooden beam scales with fulcrum-pointed scales and to have their weights and measures tested and stamped by the Stamping Section of the Madras Collectorate.

Anti-rabic measures :—The Superintendent, Lethal Chamber, accompanied by 4 trained dog catchers went round the city throughout the year in the dog van and caught 13,011 stray dogs of which 6,883 were bitches. 381 of these dogs were released and restored to the owners after consideration of the claims made by them. 113 dogs were given to the 2 Medical Colleges in the city for dissection purposes. The rest of the dogs caught were destroyed by electrocution at the Lethal Chamber.

5 stray pigs were caught by licensed pig catchers. They were brought to the Pig Slaughter House where they were auctioned for Rs. 24/- and subsequently slaughtered.

Propaganda :—The inculcation of civic ideas by means of propaganda was carried on throughout the year. There were 770 talks and 1,714 lectures on health subjects. 130 demonstrations with magic lantern slides were held for the benefit of the lay public. Exhibition stalls were opened in the I.N.A. Exhibition held from 19-8-1946 to 23-9-1946 and in the All-India Swadeshi Exhibition held from 23-12-1946.

Zoological Garden :—The live-stock in the Zoo was replenished by the acquisition of the following animals, some of which were purchased while the rest were received as gifts.

Animals purchased

2 Camels	2 Flamingoes
4 Ajutants	2 Pelicans
3 Demoiselle Cranes	3 Saras Cranes

Animals received as gifts

1 Cat (Civet)	presented by	Mr. R. K. Mohan Krishnan
2 Cats (Toddy)	„	Well-Wisher
1 Cockatoo	„	Mrs. Mary Buck
1 Jackal	„	Mr. Balram
1 Leopard	„	Mr. P. V. S. Naidu
1 Pea Hen (Green)	„	Mr. P. T. Parthasarathy
23 Rabbits	„	Mr. Ananthakrishna Chetty
2 Turtles	„	The Department of Fisheries
2 Tiger Cubs	„	The District Forest Officer, Madura
1 Wild Goat	„	Mr. C. J. Mohan

There were also births and hatchings among the animals in the Zoo. They are as follows :—

Births

- 1 Black Buck
- 2 Leopard Cubs
- 1 Mouse Deer
- 16 Rabbits
- 2 Sambhur Deer
- 4 Spotted Deer
- 1 Zebra

Hatchings

- 25 Pigeons
- 1 Roman Pigeon

A Parrot and a Night Heron were captured and kept in the Zoo.

The following animals died of natural causes during the year :—

Mammals

- 1 Langur Monkey
- 1 Mandrill
- 1 Monkey
- 7 Rabbits
- 5 Sambhur Deer
- 4 Spotted Deer
- 1 Tiger Cub
- 1 Wandargo Monkey

Birds

- 1 Cockatoo
- 1 Flemingo
- 3 Ducks
- 2 Emus
- 1 Night Heron
- 1 Parrot (Green)
- 2 Pigeons
- 1 Sea Gull

Reptiles

- 2 Snakes
- 1 Tortoise

9 spotted Deer, 2 Mouse Deer, 4 Pigeons and 8 Ducks were sold during the year for Rs. 350.

The right of collecting the entrance fees to the Zoo for 1945-47 was let on lease for Rs. 24,125 and the right of running a Cafe within the Zoo for 1946-47 was let on lease for Rs. 1,500. The Elephants were permitted to be hired for ceremonial processions on several occasions and a sum of Rs. 2,315 was realised thereby.

An allotment of Rs. 25,000 was made in the budget for making improvements in the Zoo. The work of constructing shelters for the Sambhur

Deer and for the newly acquired Camels was under progress. The erection of 3 sheds for the Elephants taken up in the previous year was completed before the end of the year under report.

Boating :—At the beginning of the year one boat and two poling punts plied in the Zoo lake. As boating became more popular 15 boats were newly purchased out of which 7 are plying in the Zoo lake and 4 are plying in the pond beside the newly opened Sports Arena. The right of collecting the fees for plying boats in the Zoo lake was let on lease for Rs. 1,900.

Swimming Bath :—The total number of bathers during the year under report was 18,379 against 23,715 in 1945-46. The bath remained closed from 1-7-46 to 17-8-46 for the purpose of executing improvements. Compound walls were constructed on the eastern and western sides of the bath. The number of shower baths in the gents' dressing room was raised from 2 to 6. Wash-hand basin stands with taps and flushout latrines were provided in the dressing rooms for gents and for ladies. The number of diving platforms was increased to 4 and a "shoot" was provided. A qualified Instructor assisted by 2 Swimming Guides taught non-swimmers how to swim besides keeping a watch over them lest they should go beyond their depths. The income from entrance fees amounted to Rs. 5,129-10-0.

Poor House :—This voluntary home for beggars had 146 inmates at the beginning of the year. 231 beggars were admitted as inmates during the course of the year. 218 inmates were discharged while 26 escaped and 35 died before the year came to a close.

The inmates were given special feeds on 11 festival days and on the birthday of H. H. the Maharajah of Travancore out of the interest accruing from endowments made for the purpose.

Mr. D. H. Chandrasekara Ayyar, Chairman, Central Beggar Relief Committee, Mysore, visited the institution on 21-6-1946 and Her Excellency Lady Nye visited it on 29-11-1946 and they recorded their observations in the Visitors' Book.

Work House :—As laid down in the amended section 71A of the Madras City Police Act a Work House for beggars capable of doing manual labour was constructed by the side of the Poor House, Suryanarayana Chetty Street, Royapuram. It began to function from 5-3-1946. It was formerly opened by the Hon'ble Mr. Daniel Thomas, Minister for Local Administration, on 8-6-1946.

This institution has 2 sections, one for males with accommodation for 100 inmates and the other for females with accommodation for 50 inmates. Each section consists of a dormitory, a dining hall, a sick ward, a bath room, flushout latrines and a work shed.

The Superintendent of the Poor House assisted by a staff of Wardens and Instructors is in charge of it. The Chief Warden is provided with quarters adjacent to the institution. The Collector of Madras, the Inspector General of Prisons, Commissioner of Police and the Chief Presidency Magistrate are official visitors under the rules governing this institution.

Vocational training for male inmates in mat weaving, rattan work, rope making, spinning and tape making and for female inmates in crochet work, embroidery work and sewing is provided.

The number of beggars committed to this institution since its opening was 144 of which 118 were males and 26 were females. 32 of them were committed for periods below 1 year and 112 for periods above 1 year.

11 inmates were discharged on the expiry of their detention period while 9 escaped and 2 died before their period of commitment expired.

2 opium addicts committed to 2 years became "sober" and entirely disinclined to resort to the baneful habit any more.

Her Excellency Lady Nye visited this institution on 29-11-1946. The Hon'ble Mr. Daniel Thomas gave a special feed to the inmates on the Christmas day.

Special Home :—There were in the Special Home for the diseased and infirm, 247 inmates at the beginning of the year 1946-47. There were 270 admissions during the course of the year. 25 inmates from the Work House were transferred to this institution as they were found to be diseased and unfit to do manual work.

138 inmates who had served their detention period were discharged before the end of the year. 3 more inmates were discharged under the revisional orders of the High Court. 21 inmates who had been successfully treated and rendered fit to do manual work were transferred to the Work House. One child committed along with its mother suffering from infective leprosy was handed over to its father lest it should contract the disease by continuous contact with the mother. 73 inmates died of various causes and 37 escaped. The strength of the home on 31-3-1947 was 269.

Details of admissions and discharges according to sex are set forth below :—

Particulars	Adults		Children	Total
	Men	Women		
No. of inmates on 1-4-1946	200	45	2	247
No. admitted	229	40	1	270
No. transferred from Work House	25	...	...	25
No. discharged after expiry of detention period	106	30	2	138
No. discharged as ordered by High Court	2	1	...	3
No. transferred to Work House	21	...	...	21
No. escaped	37	...	1*	38
No. died	66	7	...	73
No. of inmates on 31-3-1947	222	47	...	269

* handed over to father

The inmates were committed to periods of detention varying from 1 year to 3 years :—

Periods	No. of inmates
1 year	26
2 years	268
3 years	1

Among the 295 admissions for the year there were cases of diseased, blind and infirm beggars. Details in this behalf are given below :—

Particulars	Adults		Children	Total
	Men	Women		
1. Leprosy				
(1) Infective ...	31	4	...	35
(2) Non-infective ...	82	5	1	88
2. Blind ...	15	3	...	18
3. Infirm ...	15	...	...	15
4. Other diseases ...	111	28	...	139

Every inmate was found, at the time of admission, to be in a bad state of health. With good food, medical treatment and proper nursing an appreciable improvement in their health was noticed. The average weight of 85·7 lbs. for admissions rose to 92·2 lbs. for discharges.

Leper inmates were daily given inunction of *Oleum Hydrocorpus* and had their sores daily dressed. Inmates suffering from other diseases received suitable treatment and were completely cured. 6 inmates requiring specialised treatment were sent to the Government Hospitals having facilities for such treatment and brought back.

16 of the inmates who were discharged after the expiry of the detention period voluntarily surrendered to the police authorities and were recommitted to the home.

Her Excellency Lady Nye and the Hon'ble Mr. Daniel Thomas, Minister for Local Administration, visited the home. The Collector of Madras, Inspector General of Prisons, the Chief Presidency Magistrate and the Commissioner of Police also visited the home and recorded their observations.

The inmates were provided with light refreshments on the following occasions by philanthropic gentlemen.

- | | | |
|---------------------------------------|---|--|
| (1) Tamil new year day | } | by Mr. S. K. Sundaram, Proprietor, Hotel Everest, Periamet. |
| (2) Deepavali day & child's birth day | | |
| (3) Christmas day | } | by Hon'ble Mr. Daniel Thomas, Minister for Local Administration. |
| (4) Pongal day | | |
| | } | by Mr. S.K. Sundaram, Proprietor, Hotel Everest. |
| | | |

Out of Rs. 17,000 donated by the Madras Race Club a new ward was opened and named the 'M. R. C. Ward'. It is provided with 2 bath-rooms and 4 flushout latrines. 2 flushout latrines for the female inmates have direct connection to the ward.

REPORT ON THE WORKING OF THE QUARANTINE REGULATION

(By the Port Health Officer, Madras)

Altogether 673 vessels arrived in Port during the year. The total number of crew and passengers arrived on these vessels were 61,480 and 1,51,493 respectively. Of these, only five vessels arrived infected with eleven cases of chicken-pox on board and only one arrived with one case of small-pox

and one case of chicken-pox. All necessary precautionary measures were taken in each case including thorough disinfection of the ship as well as vaccination of crew and passengers of the ship infected with small-pox who were found not vaccinated after medical inspection.

During the year three vessels became infected with chicken-pox when lying in the harbour. The patients were sent to the Infectious Diseases Hospital for treatment and all precautionary measures were promptly taken by the Port Health Department.

Throughout the year 685 vessels departed from this port of which 292 vessels leaving for foreign ports only were inspected before departure. The total number of crew and passengers inspected on these vessels were 27,775 and 40,049 respectively. Two deck passengers and an Indian crew were rejected by this Department for chicken-pox at the time of medical inspection and were sent to the Infectious Diseases Hospital for treatment. A case of bilateral Mumps and a case of high fever were rejected by the respective ships Surgeons when brought to their notice.

Lascar provisions for three ships were inspected during the year. One sample of ghee and a sample of rice were sent to the Chemical Examiner for analysis. The whole consignment of ghee was condemned as reported to be not genuine and both the master and Agent of the vessel were made to replace the unwholesome stock by genuine articles.

European crew provisions were also examined on three occasions due to complaints received from the respective masters of vessels. Due to adverse reports received from the Chemical Examiner a consignment of meat and also one consignment of coffee and potatoes were condemned and destroyed.

The Madras Port Trust did not take anti-rat measures in the Port as was taken by the Port Trusts of Calcutta, Bombay and Karachi. Only the preventional measures of rat access to vessels from the wharf and vice versa were practised by the masters of the vessels acting under the instructions of the Port Health Officer according to Rule 60 A of the Indian Port Health Rules. Routine inspection by the Port Health Officer to enforce anti-rat measures proved a success as masters of vessels fully co-operated.

The sanitation of the Port Area is looked after by the Madras Port Trust and is maintained satisfactorily. Anti-mosquito measures within the Port Area were undertaken by the staff maintained by the Port Trust under the supervision of the Port Health Officer and mosquito nuisance was kept at a minimum due to adequate attention paid throughout the year. The Aedix index was shown to vary between .3 and .1 during the year. Also anti-mosquito measures of the area within half a mile radius from the Port limits were undertaken by the Madras Corporation Health Staff and their results showed that the nuisance was at a minimum during the year.

Altogether 73 consignments of damaged cargo of foodstuffs were examined by the Port Health Officer at the request of the Port Trust Traffic Manager of which only 16 consignments were found to be not rotten or damaged and the rest were all destroyed as heavily decomposed and damaged.

The Port Area as well as ships were supplied with drinking water from the Corporation main through Port Trust tanks which were periodically cleaned. No complaints were received from the masters or crew of vessels regarding the quality of water. Water barges were kept in suitable sanitary condition and were cleaned periodically.

CONSERVANCY

The conservancy of the city continued to be under the control of the Assistant Health Officers. There were four Supervisors for the four ranges into which the city was divided before the Saidapet and other mofussil areas were added to it. In October 1946 one of the Senior Sanitary Inspectors was deputed to do the duties of a Supervisor so that there might be five Supervisors to work under the Assistant Health Officers for the five ranges into which the city was subsequently divided.

Two important features during the year under report were the strike of the conservancy coolies from 13-8-1946 to 3-9-1946 and the floods in last quarter necessitating emergency measures. The measures adopted to tide over the difficulty caused by the strike of the conservancy coolies is separately dealt with in detail.

As regards the floods, people rendered homeless were sheltered in the Corporation school buildings nearby and the Conservancy Staff in conjunction with the Sanitary Staff attended to their feeding and comforts. These places of refuge and slum areas were specially conserved as a precaution against any outbreak of any water-borne epidemic. Arrangements were made to pump out water from water logged areas and to the removal of silt and dirt promptly.

The total expenditure on conservancy for the year 1946-47 was Rs. 24,22,780 against Rs. 17,62,117-4-8 for 1945-46. There were 1,899 coolies for cleaning streets, drains, latrines and water-tables. 506 trollies and rubbish carts, 30 night-soil carts and 55 sewage and silt carts were used for the removal of filth, sewage and silt in the city. 29 motor lorries were used for the removal of rubbish and filth. These lorries were marched out daily from the Lorry Station and the two cattle depots at Harris Road and Krishnampet. The charges incurred for the use of these lorries during 1946-47 amounted to Rs. 1,32,117-0-0. The collection centres at Langs Garden and Krishnampet continued to function satisfactorily. The Basin Bridge centre also functioned as the military authorities vacated the site in the previous year. The pail depot at Korukupet worked satisfactorily.

Disposal of rubbish :—About 6,16,150 cart-loads of rubbish were removed during the year against 6,75,270 cart-loads in the previous year. Of these, about 39,817 cart-loads were used for raising lowlands in the city and the rest of the rubbish was dumped at the Otteri, Korukupet and Mylapore dumping grounds. The rubbish collected from Saidapet area was dumped at the Saidapet dumping ground.

Disposal of filth :—About 49,441 cart-loads of filth were removed during the year against 51,502 cart-loads removed during the previous year. Of these, 5,484 cart-loads of filth were flushed into the sewers at the pail depot at Korukupet and the remaining cart-loads were trenched at the dumping grounds in Otteri, Korukupet and Saidapet. The amount realised by the sale of manure and cow dung during the year 1946-47, was Rs. 15,865-0-0.

Public latrines :—362 public latrines existed in the city during the year under report. Of these, 322 were of the flushout type and 40 were masonry

and sanded latrines. 31 public conveniences were opened for public use during the year at the following places :—

Serial No.	Division No.	PLACE
1	2	P. C. No. 114 in Venkatesa Naicken Street
2	4	P. C. No. 115 in Bishopcherry
3	9	P. C. No. 80 in Aseervathapuram
4	17	P. C. No. 113 in Demellows Road (opposite to Toddy-shop)
5	21	P. C. No. 106 in Lock Street
6	24	P. C. No. 112 in East Cooum River Road
7	„	P. C. No. 120 in East Cooum River Road (opposite to Lafond Street)
8	25	P. C. No. 124 in West Cooum River Road (opposite to Arrack-shop)
9	„	P. C. No. 127 in West Cooum River Road (opposite to Toddy-shop)
10	„	P. C. No. 122 in West Cooum River Road (within the Corporation Boys School compound)
11	„	P. C. No. 121 in West Cooum River Road (adjacent to Laws Bridge)
12	„	P. C. No. 121-A in West Cooum River Road (within the park adjacent to Xavier Church)
13	26	P. C. No. 124 at the junction of Getti Ponnai Street and Langs Garden Road
14	„	P. C. No. 125 at the junction of Langs Garden Road and Narayana Naicken Street
15	„	P. C. No. 130 at the junction of Muniapillai Street and South Cooum River Road
16	„	P. C. No. 132/133 Marshall Road (at the junction of South Cooum River Road)
17	27	P. C. No. 134 Pantheon Road (near Anderson Bridge)
18	28	P. C. No. 108 in Model School Road (Thousand Lights)
19	„	P. C. No. 135 in Spur Tank Road (opposite to T. B. Hospital)
20	„	P. C. No. 143 in Club House Road (at the junction of Mount Road)
21	29	P. C. No. 136 in Appaswamy Mudali Street
22	„	P. C. No. 137 in Washerman Lane
23	„	P. C. No. 138 in Venkatachella Pillai Street
24	„	P. C. No. 141 in Kodambakkam High Road
25	31	P. C. No. 118 near Wallaja Bridge
26	„	P. C. No. 119 opposite to M/s Simpson & Co., (within the park) Mount Road
27	„	P. C. No. 91 in Mount Road (within the car park)
28	„	P. C. No. 129 in Dam's Road (adjacent to Harris Bridge)
29	34	P. C. No. 107 in Westcott Road
30	35	P. C. No. 109 in Rakiappa Mudali Street, Mylapore
31	„	P. C. No. 116 in Batcha Garden

The public flushout latrines were thrown open for use both day and night. The Drainage Superintendent with his staff of 4 Overseers was made responsible for the proper maintenance of the public conveniences in the city.

The Conservancy Staff paid special attention to the cleaning and disinfection of public latrines and of places where there was committal of nuisance. 395 gallons of disinfectants and 2,441 parabs of chunam and 10,953 lbs. of bleaching powder were used during the year for the disinfection of latrines, drains, road sides, etc.

Conservancy of private places:—The removal of rubbish and filth from several public institutions, private establishments and military camps in the city was undertaken as per section 197 of the City Municipal Act. The total amount realised by way of fees during the year 1946-47 was Rs. 54,376-7-9.

Labour:—In pursuance of G. O. No. 4,942 L. & M. dated 22-12-1931 coolies retiring on account of old age and infirmity were granted bonus. 207 coolies were provided with tenements in the Corporation Model Lines and 115 coolies were allowed to live in huts on Corporation land.

The President and the General Secretary of the Corporation Labour Union presented on 2-7-1946 a notice that the Corporation workers would go on strike on the expiry of one month if the demands for higher wages made in the notice were not conceded by the Corporation authorities within that period. Their demands were placed before the Corporation Council for its consideration and attempts were made to arrive at a settlement by negotiations. Certain concessions were sanctioned by the Council at its meeting held on 15-7-1946 on the recommendation of the Standing Committee (Taxation and Finance) based on the Labour Ad Hoc Committee's Report. A conference with the representatives of the various Labour Unions was held by the Commissioner on 22-7-1946 and proposals to grant further concessions were recommended to the Council which, at its meeting held on 2-8-1946, authorised the Commissioner to negotiate further with the representatives of the various Labour Unions on the basis of these proposals for the withdrawal of the strike notice and, in the event of a strike taking place, to take necessary steps to meet the situation and to spend such amounts of money as may be necessary.

In pursuance of the resolution of the Council dated 2-8-1946, a conference was held on 6-8-1946 with the representatives of the 9 Labour Unions to whom the resolution of the Council was explained. As the representatives of the Corporation Labour Union which gave notice of strike did not respond to the invitation to attend the conference on 6-8-1946 a separate conference was held on 8-8-1946 at which the Secretary and other members of that Union were present. They were told that the concessions granted and proposed to be granted as per the resolution of the Council dated 2-8-1946 were the maximum that could be expected at present. They were also assured that everything possible would be done later on to give as much relief to the workers as possible when the finances of the Corporation improved. They were not, however, inclined to come to an amicable settlement but insisted on the Corporation sanctioning their interim demands, viz. increase of basic pay by Rs. 5, increase of the dearness allowance by Rs. 5, grant of house rent allowance of Rs. 2 per mensem and raising the minimum pay of the labourers (women and boys) to Rs. 15. This was put down as their minimum demands and they would not even consider any compromise on these demands.

The strike materialised on 13-8-1946, a majority of the strikers being the conservancy labourers. Arrangements had previously been made to carry on the essential services during the strike. Seven centres were opened in the city in the Corporation schools and other Corporation buildings for housing and feeding the available labourers. In Saīdapet and Sembiam two separate centres were opened for the labourers of those areas. About 1,200 labourers were put on conservancy work in the city even on 13-8-1946, the first day of the strike. Of these, 250 coolies were from the permanent labour staff and about 250 were from the acting and temporary men awaiting absorption in permanent service. The latter had been previously warned that in case they absented themselves during the strike, they would not be re-employed. On



Tenements in Kodambakkam High Road
(Newly constructed)



Tenements in Old Slaughter House Road, Choolai
(Newly constructed)



Home for the homeless, Elephant Gate Street
(Near People's Park)



Reclamation of lowland by the side of
the Pencil Factory

14-8-1946 about 1,300 labourers were present and on 25-8-1946, 1,637 labourers were employed comprising 458 permanent workers, 170 acting men and 1,009 fresh recruits. Out of these, about 1,460 coolies attended to the removal of rubbish and filth. These coolies were paid at the following rates:—

1. Risk bonus to permanent and acting coolies at Re. 1 each per day in addition to the usual wages. Those who yoked the carts were paid Rs. 2 each.
2. Wages for new recruits at Rs. 2 each per diem.
3. Conservancy peons and labourers working during the strike were paid a bonus of Re. 1 each.
4. Lorry Drivers and Cleaners were paid Rs. 2 and Re. 1 each respectively.

The Sanitary Inspectors were given cash advances from time to time in order to pay the coolies daily. All the coolies were fed at the centres where they were housed. Food was prepared at the Midday Meal Centre and distributed in the food vans to the various centres including Saidapet and Sembiam.

For the first few days only lorries were sent for conservancy. In course of time attempts were made to march out a few carts. At the beginning 38 lorries were marched out. The number of lorries was increased to 45 by utilising all the lorries of Health Department and Works Department. Besides, it had been possible to march out conservancy carts also by getting sufficient number of men to yoke the carts with the help of the police. On 19-8-1946 about 100 carts were marched out for work in various divisions and on 25-8-1946 the number increased to about 200. There was perceptible improvement in the conservancy of the city. All the night-soil in areas where there are dry latrines was removed regularly by means of lorries. The staff of the Health Department worked vigorously. The situation gradually improved and on 30-8-1946, 1,945 coolies attended to conservancy work, the total number of coolies who attended to work in all Departments being over 5,300. With effect from 31st August, 1946, the payment of risk allowance was stopped. Notwithstanding this the situation continued to improve.

There were mob demonstrations, picketting and obstruction by the strikers at the Lorry Station, Conservancy Depots and the centres where the loyal workers were housed and fed. Assaults on and stone throwing at the loyal workers, lorries and carts were a common feature during the first 15 days of strike. When the offenders were arrested by the police and prosecuted, the situation came under control and during the last few days of the strike, except for stray incidents here and there, the loyal workers were able to carry on their normal duties peacefully.

A notice was issued by the Commissioner informing the coolies that if they did not return to work before 7 a.m. on 16-8-1946 their services would be terminated. Some permanent workers returned to work on and after 16-8-1946.

Intensive propaganda was conducted by the Health Staff to counteract the mischievous misrepresentations of the Corporation Labour Union. Printed pamphlets instructing the public in the matter of disposal of household rubbish and filth were distributed widely. A propaganda van fitted with loud speaker equipment was used for the purpose of instructing the public and advising the labourers. From the very start Government

took a very keen interest in the strike situation and tried their utmost to bring about an amicable settlement in the best interest of the Corporation as also that of workers ; but the efforts made in this direction by the Hon'ble Minister for Local Administration could not succeed, as the Labour Union was very unreasonable in insisting on the Commissioner conceding immediately their minimum demands, viz , increase of Rs. 5 in basic wages and Rs. 5 in D.A. and grant of Rs. 2 p.m. house rent allowance as an interim arrangement, the long term arrangement taking a few more months to materialise. With a view to concert measures as to how best the co-operation of Social Welfare Leagues and Civic Associations in the city and of public spirited citizens could be secured, a conference of the representatives of these Leagues and Associations and of leading public men was held in the Council Chamber on 25-8-1946 when the Hon'ble Minister for Local Administration presided. The Hon'ble Minister for Public Health and the Councillors of the Corporation were also present. The Hon'ble Minister for Local Administration appealed to those present to do their best and to see that the city's health was not imperilled. The keen personal interest evinced by the Hon'ble Minister in maintaining the health of the city and in organising cleaning campaigns in the heated and violent atmosphere of the strike days had been an immense source of strength and encouragement to the entire Sanitary Staff. A tribute must be paid to the excellent work of the police without whose aid it would have been impossible to conserve the streets.

Mr. K. Sanjiva Kamath, B.A., B.L., wrote to the Commissioner on 2-9-1946 enclosing a copy of the resolution passed at a public meeting of the citizens of Madras on 31-8-1946 and later met the Commissioner with a view to reaching a settlement with the Corporation Labour Union. The labour representatives were very insistent that they should be granted atleast an increase of Rs. 5 in basic wage (inclusive of Rs. 2 already sanctioned by the Council with effect from 1-7-1946) and that a house rent allowance of Rs. 2 p.m. should also be given. Mr. Sanjiva Kamath represented that with a view to improve the living conditions of the labourers a house rent allowance of Rs. 2 p.m. might be given and that an increase of Rs. 5 in basic wage was not much when compared with the concessions recently granted in Bombay. As a compromise implies giving and taking on both sides it was agreed that the Commissioner should recommend to the Council the following further concessions :—

	<i>Extra cost</i>
	Rs.
(1) Increase in basic wage by Re. 1 to those drawing Rs 15 and more already (numbering about 7,200 workers) excluding Rs. 2 already sanctioned by the Council	86,000

*Note :—*As already resolved by the Council this increase in basic wage will apply to all labourers including those in Special Works, Pallavaram and others except those who are employed on specific estimates who are paid according to sanctioned schedule of rates.

(2) Grant of a house rent allowance of Rs. 2 p.m. to all permanent labourers (numbering 8,500 workers) borne on Establishment and Labour schedules	2,04,000
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*Note :—*It will not be admissible to Pallavaram labour or to casual, temporary or work charged labour.

2,90,000

(3) There should be no victimisation and all persons on the rolls on the day of the strike should be taken back.	
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(4) A portion of the period of strike to be treated as casual leave with pay for 15 days, i.e., if a labourer has not taken any casual leave in the calendar year 1946, he should be given 15 days C. L. and for those who have availed of a few days' casual leave, 15 days C. L. should be reduced to that extent.

(5) Concessions 1 and 2 to take effect from 1-7-1946.

On the understanding that these concessions will be recommended to the Council, the Corporation Labour Union called off the strike from 4-9-1946.

The Commissioner recommended these further concessions for acceptance by the Council as they were intended to be a long term settlement and as they were within the limits already set by the Ad Hoc Committee on Labour and approved by the Council. The Council accorded its sanction to these proposals of the Commissioner on 30-9-1946.

Conservancy cattle depots:—The year opened with 7 conservancy cattle depots. One small depot was opened for Kodambakkam area during the year. From 1-4-1946, Saidapet municipal conservancy depot was brought under the control of the Corporation of Madras. For the Sembiam defunct Panchayat Board, the conservancy bullocks were hired on a contract basis for one year from 1-4-1946, but the conservancy carts were sent from the Perambur conservancy depot. 5 depots were under the charge of the Veterinary Graduates during the year and the rest were managed by the Sanitary Inspectors.

Animals:—The number of animals on hand on 1-1-1946 was 800. 60 animals were purchased during the year as against 215 animals purchased during the year 1945. 2 conservancy bullocks from Aminjikarai defunct Panchayat Board were brought into Corporation accounts, as also 52 bullocks from the Saidapet conservancy depot. 25 unserviceable bullocks were sold during the year; 2 unserviceable bullocks which were permanently transferred some years ago to the Superintendent of Parks were also sold along with them. 74 bullocks died during the year as against 119 bullocks in 1945 and 163 bullocks in 1944. Thus there was a balance of 815 bullocks (1 at the Zoo and 2 at the parks) at the end of the year.

The number of casualties during the year was the lowest on record for several years. Out of 74 casualties, 12 bullocks which proved positive for Tuberculine test were destroyed for Tuberculosis. 35 bullocks died of old age and senile debility, 8 of Tuberculosis, 2 of Piroplasmosis, 1 of foot and mouth disease, 1 of Haemorrhagic Septicimia, 1 of Anthrax, 3 of accidents and 11 from other causes.

Anthrax:—There was one death from 'Anthrax' at the Royapuram conservancy depot during the month of May 1946. All preventive measures were immediately adopted and all the depot bullocks were promptly protected with anti-Anthrax serum, and there was no fresh attack.

Foot and Mouth disease:—This disease broke out first at the Royapuram conservancy depot during January 1946 and spread to other depots. Except the Mylapore depot all other depot bullocks were affected with the disease and the disease lasted till about September. Through prompt segregation and careful treatment, the disease was not allowed to spread in quick succession and the total number of bullocks affected in all the conservancy depots during the whole period was only 95. There was only one death from the disease at Choolai conservancy depot, but on account of the severity of the disease, many of the bullocks lost their condition.

Tuberculosis:—Due to the nature of work, the conservancy bullocks are subject to and contract very easily this terrible disease. Every precaution

was adopted during the year to prevent this terrible disease. 73 bullocks which were suspected for Tuberculosis were segregated and tested for Tuberculosis with the Tuberculine test during the course of the year. Out of these, 20 bullocks reacted positive for the Tuberculosis test. 12 bullocks were destroyed immediately and the rest died.

Piroplasmosis :—This disease was prevalent at Royapuram and Basin Bridge conservancy depots. Prompt measures were adopted to prevent the spread of this infection. There were 2 deaths, one at 'A' Depot and the other at 'B' Depot.

765 cases were treated for various causes in the conservancy cattle depots and 157 cases were treated at the Corporation Veterinary Hospital, Vyasarpady.

The Veterinary Graduates who were in charge of conservancy cattle depots were relieved of many of their routine depot work and were instructed to inspect the private cattle yards in the divisions, advise the owners with regard to the health of the milch cattle and to protect all the milch cattle in the yards by conferring permanent immunity against Rinderpest. A Conservancy Inspector was appointed for each depot to look to the routine work of the depot. There were 6 veterinary depot Superintendents who were available for the cattle yard inspection work during the year and they paid 2,029 visits to cattle yards during the year and protected 5,915 milch cattle against Rinderpest.

MOSQUITO CONTROL MEASURES

The division of the city into four ranges, each in charge of a Malaria Supervisor, continued till the end of March 1946, when the city was extended and divided into five ranges. Saidapet area continued to be under the charge of a Sanitary Inspector with special training in anti-malarial operations while Sembiam and Iyanavaram areas were placed under the supervision of the Malaria Supervisor, II Range.

The staff consisted of a Medical Officer, who is a qualified II class Health Officer, assisted by four Supervisors besides a Sanitary Inspector for the added area of Saidapet. The complement of coolies was the same as in the preceding year until November 1946, when a reduction of ten per cent was effected on account of retrenchment. From the city complement five coolies with a maistry were diverted to carry on the anti-malarial measures in the extended areas comprising West Mambalam and Kodambakam while six coolies from the conservancy section of Sembiam area were utilised for anti-malarial operations for both the areas of Sembiam and Iyanavaram.

Tanks and ponds :—418 tanks and ponds, inclusive of those in the extended areas, existed during the year. All of them were constantly inspected and the owners were notified to clean them periodically. 110 of these tanks and ponds were cleaned departmentally on payment of nominal charges by the owners. 8 private tanks were cleaned departmentally, free of charge, on account of their receiving storm water from the surrounding areas. The remaining tanks and ponds were cleaned by the owners themselves and were kept free from mosquito larvae. 10 Corporation tanks were cleaned periodically by the department and larvicidal fishes were bred in them. Several of these tanks supplied larvicidal fish (*Gambusia*) in sufficient quantities for stocking them in wells, fountains, cisterns and A. R. P. Fire Service static tanks. Two private tanks, one in the 5th division and the other in 37th division, were filled up.

Wells :—About 20,001 wells including those in the extended areas of Saidapet, Sembiam and Iyanavaram existed as against 17,123 in the

preceding year. A separate staff examined these wells once in 2 months and introduced larvicidal fish in them after removing all floating matter and aquatic vegetation. 96 new wells were detected. 126 wells were found in a neglected condition. All of them were immediately attended to. To prevent mosquito breeding they were stocked with larvivorous fish. 347 wells had Cuddappah-slab coverings and 301 wells had trap-door fittings. 84 wells were filled up.

The fish gangs went round every house during the course of their work to detect larvae breeding in collections of water found in broken vessels, tins, cisterns, tubs, etc. Whenever such facilities for breeding were found, they had them destroyed.

Anopheles stephensi (malaria carrier) *aedes aegypti* (vector of yellow fever and dengue fever) and *culex fatigans* (vector of filariasis) were found to breed in some wells. These wells were periodically inspected and treated effectively.

Anti-stegomyia services:—Half a mile around the Madras Port Trust stegomyia control measures were continued as in the previous years. The mosquito house index ranged from 0.141 to 0.306 against 0.44 to 0.98 in 1945 the index at the time of commencement of the survey in 1936 being 14.0 and the stegomyia house index ranged from 0.02 to 0.07 against 9.9 in 1936. The stegomyia house index was furnished to the Director of Public Health and to the Port Health Officer.

The staff visited and searched every premises for mosquito breeding places. Larvae found were sent to the laboratory for identification of the species. Instructions to prevent further breeding of mosquitos were given to every owner or occupier of premises wherein there was breeding. Public offices, institutions and firms were required to take preventive measures against breeding of mosquitoes in fire-buckets, cisterns, drains, over-head tanks and wells.

In divisions 1, 2, 4, 5, 18, 19, 20, 21, 22, 26 to 29, 31, 36, 37, 38 and 40 house inspection squads visited every building and destroyed mosquito breeding grounds. During their course of work they removed old and unserviceable receptacles from some of the houses visited by them and had them destroyed. The mosquito house index ranged from 0.2 to 0.44 as compared with that of 9.5 at the beginning of the campaign in the year 1937.

Public drains, cesspools, etc.:—Mosquito control measures were regularly carried out, once a week, to prevent larvae breeding in all covered and open drains, ditch drains, cess-pools, gully traps, stagnant pits, lowlands, etc. in the city as well as in extended areas. Occasional breeding in storm water drains was immediately destroyed during such periodical inspections.

River Cooum and Buckingham Canal:—In both these water-ways a separate gang operated for removing weeds and moss. A special squad was deputed to dust "*Paris Green*" mixture along the edges of the river and the canal to control the breeding of anopheles mosquitoes.

Reclamation of lowlands:—The following lowlying parts in the city were reclaimed during the year:—

Lowlands in Meenakshiammanpet			
	(next to Robinson Park Dhobykhana)	...	3rd Dn.
,,	in Thiagappa Chetty Street, Korukupet	...	5th Dn.
,,	near Pencil Factory	...	5th Dn.

Lowlands in Hope Lodge	...	... 17th Dn.
„ „ Perambur Burial ground	...	... 18th Dn.
„ „ Conran Smith Nagar	...	... 20th Dn.
„ „ Edward Park	...	... 20th Dn.
„ „ Nehru Park	...	... 22nd Dn.
„ „ Peoples Park	...	... 23rd Dn.
„ behind Ripon Buildings	...	... 23rd Dn.
„ in Police Commissioner's Office	...	... 27th Dn.
„ „ Spur Tank Road	...	... 28th Dn.
„ „ Sterling Road	...	... 29th Dn.
„ „ Tank Bund Road, Nungambakam	...	... 29th Dn.

The reclamation of “*Arathakuttai*”, a large pond in Mylapore, had been engaging the attention of the Department for a long time. The owners who were approached in the matter eventually gave their consent to have it filled up by the Corporation and used as a park after its reclamation. The filling-up work was taken up and proceeded with during the year under report. During monsoon time the tank was filled with water and the reclamation work had to be suspended. It was resumed after pumping out water in April, 1947.

REPORT OF THE PUBLIC ANALYST FOR THE CITY OF MADRAS FOR 1946

In May 1946, one Assistant and one Attender were appointed as additional staff for the Public Analyst's Laboratory. During the latter part of 1946, my staff consisted of two Assistants, one Technician, two Laboratory Attenders and one Peon.

During the year 1946, the number of samples analysed under the Madras Prevention of Adulteration Act, 1918, was 2,665 against 2,037 in 1945. Of the 2,665 samples analysed, 1,642 samples were genuine and the remaining 1,023 samples were found to be adulterated. The percentage of adulterated samples during the year under report was 38.4 against 36.3 in 1945.

The samples comprised milk, butter, ghee, gingelly oil, groundnut oil, cocoanut oil, coffee powder, tea, ghee substitutes and other articles. A tabular statement of the samples analysed in 1946 and during the previous five years is given in Statement No. 1.

64.6 per cent of the milk samples were adulterated in 1946 against 56.5 per cent in 1945. 22.0 per cent of the butter samples were adulterated in 1946 against 20.0 in 1945. In the case of ghee, 6.7 per cent of the samples were adulterated against 13.7 in 1945. The figure of 6.7 is the lowest on record since the Act came into force in Madras City. Adulteration of gingelly oil and groundnut oil increased slightly during the year. Cocoanut oil had been genuine for the past several years, but due to the abnormal rise in price of this article adulteration of cocoanut oil which began in 1945 continued on a larger scale during 1946. The percentage of adulterated samples in 1946 was 31.1. As a result of prompt action taken by the Corporation, the evil practice had been checked considerably towards the close of the year under report. There was no adulteration in the case of coffee powder and tea during the year under report.

The details regarding the various articles of food analysed during the year under report are given below :—

Milk :—1,227 samples were analysed. Of these, 484 samples were cow's milk, 499 were buffalo's milk, 178 were described as mixture of cow's and

buffalo's milk and 66 were described as milk without being qualified as cow's or buffalo's.

Of the 484 samples of cow's milk, 288 were found to be adulterated. 281 of these contained added water ranging from 2 per cent to 76 per cent, 5 samples were deficient in fat to the extent of from 27 per cent to 73 per cent and 2 samples contained added water and were also deficient in fat, the deficiency in fat being more than could be accounted for by the added water.

Of the 499 samples of buffalo's milk, 346 were adulterated. Of these, 345 samples contained added water ranging from 3 to 76 per cent and one sample not only contained 38 per cent added water but was also deficient in fat to the extent of 39 per cent.

Of the 178 samples described as mixture of cow's and buffalo's milk, 132 contained added water ranging from 2 to 79 per cent and one sample contained 21 per cent of added water and was also deficient in fat to the extent of 37 per cent.

Of the 66 samples sold as milk without the description cow's or buffalo's, 26 were adulterated and contained added water ranging from 5 to 67 per cent. There was no fat deficiency in any of the samples.

Butter :—164 samples of butter were analysed, of which 36 were certified as adulterated. 34 samples contained excess water ranging from 2.2 to 31.9 per cent (Maximum limit for water in butter prescribed under the Act—20.0 per cent.) 2 samples contained both excess water and fat other than milk fat, the excess water and foreign fat being 5.3 per cent and 24 per cent respectively in one and 5.0 per cent and 28 per cent in the other.

Ghee :—464 samples were analysed and 31 were found to be adulterated. The common adulterant was hardened groundnut oil and the extent of adulteration varied from 19 per cent to 97 per cent.

Gingelly Oil :—285 samples were analysed of which 26 were found to be adulterated. 25 were adulterated with "arachis" oil ranging from 10 to 95 per cent and one sample contained 95 per cent cocoanut oil.

Groundnut Oil :—33 samples were analysed of which 6 were certified as adulterated. Of these, 2 samples contained 100 per cent gingelly oil and the other four contained gingelly oil ranging from 45 per cent to 70 per cent.

Cocoanut Oil :—347 samples were analysed of which 108 samples were found to be adulterated with "arachis" oil. The extent of adulteration varied from 10 per cent to 90 per cent.

Coffee Powder :—74 samples were described as coffee powder, 3 samples were described as "Vasantha Toffee Powder" and 2 samples were described as "Dilkush Tablets". All the 74 samples of coffee powder were genuine. The samples of "Vasantha Toffee Powder" did not contain any coffee and hence no action could be taken though were probably intended to be sold as substitute for coffee. The samples of "Dilkush Tablets" contained coffee and chicory and had been correctly labelled in accordance with the provisions of the Prevention of Adulteration Rules, 1932.

Tea :—21 samples were analysed and all were genuine.

Ghee Substitutes :—23 samples were analysed. The samples were described as "Marvo" or "Vegetable Marvo". 12 of the samples consisted of 100

per cent hardened vegetable oil and were reported genuine. The remaining 11 samples contained ghee ranging from 3 per cent to 22 per cent in contravention of Rule 28 of the Prevention of Adulteration Rules, 1932.

Other Articles :—These consisted of 13 samples of Arrowroot and 9 samples of Turmeric. One sample of Arrowroot described as "East Indian Arrowroot" consisted of 100 per cent Curcuma starch and was reported genuine. Of the remaining 12 samples, 3 samples contained 100 per cent Tous les mois starch, one sample contained mixture of Tous les mois and Curcuma starches, one sample contained 100 per cent ground rice and 7 samples contained 100 per cent Tapioca starch.

Of the 9 samples of Turmeric, one sample was certified as adulterated as it contained 115 parts of lead per million parts of the sample (Limit prescribed—5 parts per million.)

A statement of other miscellaneous articles examined in the laboratory during the year under report is given below :—

<i>Articles examined</i>	<i>Report</i>
1,060 samples of milk analysed in connection with the scheme of free milk supply for priority consumers.	35 samples were adulterated with added water from 7 per cent to 23 per cent.
1 sample of milk taken informally and sent by H. D.	Adulterated with 67 per cent added water.
115 samples of canned and other foods from the I. R. B. S. D., Avadi.	18 samples reported unfit for sale to the public.
1 sample of gingelly oil from the Corporation Midday Meals Centre.	Genuine.
4 samples of raw rice bran sent by Health Department.	Husk contents to the extent of 6.3, 6.7, 26.5 and 28.1 per cent respectively were reported.

During the year under report, the laboratory undertook the analysis of samples sent by private parties on payment of the necessary fee. But the scheme came into effect only towards the close of 1946. 5 samples were analysed under the scheme and a sum of Rs. 45 was realised by way of fees.

During the year under report, the laboratory continued the analysis of milk samples under the priority milk supply scheme and as given above 1,060 samples were examined of which only 35 or 3.3 per cent of the samples were adulterated. The laboratory thus effectively helped in ensuring the quality of milk supplied to the priority consumers.

A tabular statement of the action taken on the adulterated samples of 1946 and the adulterated samples of 1945 pending disposal on 1st January 1946 is given in Statement No. 2.

The number of samples reported as adulterated during the year under report was 1,023. Action taken in respect of these samples comprised warning of the vendors in the case of 60 samples, seizure and forfeiture of the articles in the case of 20 samples and prosecution in the case of the remaining 943 samples.

Of the 943 prosecutions launched, vendors were convicted in 644 cases; 2 were acquitted and 6 withdrawn. 291 cases were pending disposal on 31st December 1946. Among the 148 cases of 1945 pending disposal during 1946, 139 convictions were obtained.

The total number of convictions for the sale of adulterated food during 1946 was 783 against 569 in 1945. The amount of fines imposed in 1946 was Rs. 36,980 against Rs. 32,289 in 1945. The average fine per conviction during 1946 was Rs. 47 against Rs. 57 in 1945.

There were 3 convictions under Section 14 (3) of the Act for preventing the Food Inspectors from taking samples and Rs. 115 was imposed by way of fines.

During the year under report, there was an acquittal of a case in which tapioca starch was sold as arrowroot as the court held that several starches are known as arrowroot in commerce and therefore no offence had been committed. Government have been requested to incorporate the definition of arrowroot under the rules and it is expected that arrowroot would be defined as soon as the new Prevention of Adulteration Act comes into force.

General Remarks :—It is to be pointed out that 64.6 per cent of the milk samples were adulterated during the year under report. The number of milk samples analysed in recent years and the percentage of adulterated samples among them are given below :—

Year	Number of samples analysed	Percentage of adulterated samples
1941	283	30.4
1942	365	27.1
1943	380	46.8
1944	456	45.0
1945	1,078	56.5
1946	1,227	64.6

The above table shows the increase in the number of milk samples taken annually in order to enforce the Prevention of Adulteration Act with greater vigour in respect of milk. But it is interesting to note that in spite of the increased sampling, the percentage of adulterated samples shows a considerable increase instead of decrease. Adulteration of milk has been on the increase not only in this city, but also in other urban areas of the country. This is due to the acute scarcity and the prevailing high price of milk which have resulted from the shortage of milch-cattle and fodder in the country.

It is contemplated to analyse about 2,000 samples of milk in 1947. A further increase would be effected when the necessary extra apparatus and chemicals are obtained and additional staff appointed.

For suppressing adulteration effectively, an increase in the number of samples alone would not be sufficient. With the increased number of samples, more deterrent fines should be imposed. Steps should be taken to import more milch-cattle and provide milk-men with adequate fodder at cheap rates. An adequate supply of milk should be ensured for the public at a reasonable price. When the supply of milk is adequate, its price low and the fines are deterrent, an increase in the number of samples would be effective in preventing adulteration.

V. Venkatachalam, M.A., A.R.I.C.

Public Analyst

Corporation of Madras

REPORT OF THE WATER ANALYST FOR 1946

General:—The chief feature of the system of purification of Red Hills lake water continued to be the same. With the introduction of mechanical rapid sand filtration, the plans for which are being prepared, a water of better quality will be produced.

Red Hills Lake:—The lake water was examined in January, March, June and September. The figures for “albuminoid nitrogen” and “absorbed oxygen” showed increasing deterioration in its chemical quality from January to September. There was an increase in the organic matter content of the water as judged by the figures for “albuminoid nitrogen” and “absorbed oxygen” with the decrease in the level of the lake. A complete chemical analysis of the lake water apart from that usually done for assessing its quality from a hygienic point of view was carried out in January, March, June and September.

The bacterial quality of the lake water was poor in June and fair in January, March and September.

Raw Water, Kilpuk end of the conduit:—The increasing deterioration in the chemical quality of the raw water from the Kilpauk end of the conduit was indicated by the figures for “albuminoid nitrogen” and “absorbed oxygen” from January to October. These figures also showed that the organic matter in the raw water increased during these months. The figures reached the maximum in September and came down to minimum in December.

The bacterial quality was fair in January, February and March. It deteriorated slightly in April but became fair in May and remained so up to August. In September and October the bacterial quality of raw water was poor. But it again became fair in November and December.

Chlorinated Filtered Water:—Both the chemical and bacterial qualities of the water that was filtered and chlorinated did not attain the usual high standard of purity. In June, July and August particularly the bacterial quality was not what it was expected to be on account of the production of sulphuretted hydrogen in the filtered water chambers. The dose of chlorine was carefully controlled so that an excess of free chlorine between 0.2 to 0.3 p.p.m. was always maintained in the samples drawn from the test tap at K. P. S. In spite of such careful control cent per cent absence of lactose fermenters in volumes of 60 c.c. was not obtained until December when the sulphuretted hydrogen disappeared after heavy rainfall and the lake attained its full level.

Test Tap at K. P. S.:—The chemical and bacterial qualities of the water drawn from the test-tap at K. P. S. were almost the same as those of chlorinated filtered water. The bacterial quality was the worst in July. It had not reached the usual high standard from June. Again the deterioration in the quality of test tap water as in the case of chlorinated filtered water synchronised with the production of sulphuretted hydrogen.

Distribution system of the city:—The chemical and bacterial qualities of the distribution samples were not of the usual high standard. This deterioration became greater in June, July, August and September with the increased production of sulphuretted hydrogen. In the distribution samples also it was found that results indicative of the usual high standard of purity were not obtained. This was not due to extraneous pollution of the water treated at the head works or to inefficient treatment there but to false positive presumptive organisms present in the water.

The water supplied to the city from July to October developed the smell of sulphuretted hydrogen. The odour became intensified in the long and narrow pipes of the distribution system. When such a water was used immediately it had been drawn from the tap, smell was felt to be repugnant. To allay the fears of the public that the water was contaminated, a press notification was issued explaining to them how the odour was caused and how to get rid of it before using the water.

During the year under report, the city was extended by the inclusion of Saidapet, Sembiam and other adjacent areas. The water supplied from an infiltration gallery well in Saidapet area needed only bacterial purification. The purification was carried out by the admission of bleaching powder solution into the water as it was pumped into the overhead tank. The water supplied in Sembiam area was also from an infiltration gallery well. The only purification treatment that this water required was the addition of lime and bleaching powder to it after it had been pumped into the overhead reservoir. In both Saidapet and Sembiam a restricted supply of water was made to limited areas owing to the limited capacity of the sources of supply. Outside these limited areas the people had to draw water from wells in their own houses for drinking and other purposes. A scheme was drawn up by which many bore-well pumps were erected in these places and also in other extended areas of the city like Aminjikarai and Adyar.

Raw Water of Saidapet:—This raw water was examined in April, May, August and October. It was found to be bright and sparkling during all the four examinations. Its bacterial quality was good, lactose fermenters being absent in 50 c.c. Its chemical quality was uniformly good though there was a slight deterioration in May, August and October. A complete chemical analysis of the water was done when it was first examined in April.

Distribution System of Saidapet:—In April the chemical and bacterial qualities of the samples were found to be good. But in May, August and October there was a falling off from the standard in the bacterial quality of the samples. There was also a slight deterioration in the chemical quality of the samples.

Raw Water of Sembiam :—The raw water was examined in April, June and October. In April the water was crystal clear. Its chemical quality was good and its bacterial quality was fair. But in June its physical appearance become hazy and tinged with yellow colour owing to the suspension of ferrous iron. A complete chemical analysis of the water was done to determine the dose of lime required for the removal of ferrous iron.

Distribution System of Sembiam:—In April and October the bacterial quality of the samples was good. The chemical quality was good in April but it showed slight deterioration in October. In June the chemical quality was good but the bacterial quality fell short of the standards for chlorinated water.

Private, Public and Tube Well Waters :—In Sembiam three private and public wells were examined for finding out the suitability of the water as sources of supply for areas not provided with protected supply. The topographical condition around the wells aroused suspicion regarding the bacterial purity of the water drawn from these wells. The results of bacteriological examination confirmed the suspicion. To add to the bacterial impurity, the figures for chemical constituents indicated its unwholesomeness. The use of the wells had to be therefore abandoned.

In the case of waters from tube wells either the bacterial quality or the chemical quality did not conform to the standards of purity fixed for

rural water supplies by the Director of Public Health. In these cases it was difficult, for want of knowledge of the geological conditions, to declare the safety of the water without adequate treatment. If the direction of flow of the underground water and the degree of the pervious nature of the soil at the tube well sites into which the polluting matter of the living population entered had been definitely known, some tube well waters which conformed to the chemical standards though not to the bacterial standards might have been declared safe without any form of treatment.

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CHILD WELFARE SCHEME—ANNUAL REPORT FOR 1946

A perusal of the report for the year 1946 would indicate the steady progress made in the Maternity and Child Welfare work in the city. The salient features are a marked increase in the number of pre-natal and labour cases that came under the care of the Corporation Child Welfare Scheme and the appreciable reduction in the infantile mortality rate.

Centres :—At the commencement of the year under report there were 19 child welfare centres and 10 maternity wards. In G. O. No. Ps. 529, Local Administration Department, dated 16th March 1946, Government ordered the inclusion of Saidapet, Kodambakkam, Aminjikarai, Ayanavaram, Sembiam and Adyar and other villages in those areas within city limits with effect from 1-4-1946. As the maternity and child welfare work in those areas was very poor and limited the need for opening separate child welfare centres and maternity wards for Saidapet and Sembiam areas was keenly felt and two child welfare centres with maternity wards were accordingly opened on 28-11-1946 and 9-9-1946 at Saidapet and Sembiam respectively. The child welfare centre proposed for Teynampet in 1945-46 could not be opened for want of a suitable building. The child welfare centre maintained by the Chingleput District Board at the Theosophical Society, Adyar, was taken over by the Corporation on 1-4-1946 when the area was included within the city. At present, two midwives are attached to this centre. The work is supervised by the lady doctor, Adyar Child Welfare Centre, Brodies Road. A child welfare centre with a maternity ward at Royapuram for the benefit of the residents of divisions 1 and 2 sanctioned by the Council at its meeting on 24-9-1946 could not be opened for want of a suitable building. The provision of funds made for the opening of the two centres at Teynampet and Royapuram was surrendered at the time of consideration of the Revised Budget Estimate for 1946-47. At present there are 21 child welfare centres and 12 maternity wards with 72 beds catering to the needs of the citizens of the city including the small centre run at the Theosophical Society, Adyar. The Maternity Home, Choolai, opened by Her Excellency Lady Nye on 11-2-1947, will supply a long felt want. The Home is expected to accommodate 32 beds and will be in charge of a Medical Graduate with D. G. O. qualification.

Staff :—The Lady Superintendent, Child Welfare Scheme, continued to be in charge of the Scheme. There were 22 lady doctors of whom one was the relieving lady doctor. Out of the Medical Graduates who went for War Service, Capt. C. N. Rukmani and Capt. Miss L. D'cunnah returned to the Corporation service on 28-11-1946 and 18-1-1947 respectively. Miss M. Jubai has not yet rejoined the Corporation service. There were 24 qualified health visitors and 7 general trained nurses working as health visitors. 173 midwives and 20 compounders continued to work in the Child Welfare Scheme.

Pre-natal Clinics :—Pre-natal clinics were held thrice a week in each centre and expectant mothers were advised to attend these clinics by the health visitors during their home visits. 3,049 clinics were held in various centres. 25,646 new expectant mothers attended the clinics and sought medical advice and treatment against 20,622 cases in 1945. The health visitors registered 27,162 expectant mothers in the houses of the patients. The patients were advised by the lady doctors and were followed up by the health visitors till their confinement. The clinics having become popular, a large number of mothers had the benefit of the instructions, advice and treatment given at the centres.

Maternity Service :—Out of 38,365 births in the city and 3,001 in extended areas, 18,407 labour cases within the city and 740 in the extended areas, came under the care of the Scheme making a total of 19,147 labour cases of which 15,855 were non-Muslims and 3,292 were Muslims. 3,782 births were conducted in the Corporation maternity wards during the year 1946. The midwives paid 191,201 visits and the health visitors 174,996 visits in the homes of the patients. The lady doctors paid 22,268 visits. Among births there were 154 twins.

A sum of Rs 5,653-8-0 was realised as fees for maternity service rendered to persons whose income ranged from Rs. 51 to Rs. 200 p.m. against Rs. 3,201 for 1945. This indicates the increased popularity of the Scheme among the middle class people also.

Maternal Mortality :—Out of 19,147 cases of labour that came under the care of the scheme, 49 cases of maternal mortality were recorded as noted below which works out to 2.5 per mille against 1.57 in 1945 and 2.2 in 1944.

Child Welfare Scheme	6
Hospital	36
Private doctors	4
Vaidyans	1
Barber women	2
	<hr/>
	49
	<hr/>

The increase in the maternal mortality rate during 1946 was due to 36 deaths that occurred among 1,086 cases admitted into the hospitals and all these deaths had to be taken into account by the Scheme.

Infantile Mortality :—14,002 babies born in the year 1945 were kept under observation during their first year of life. 398 were still-births. The mortality among live-births was 1,331. 654 babies left the city or were otherwise not traceable; 11,619 infants were alive after completion of their first year. The infantile mortality rate was 102.8 per mille (the lowest record) against 141.9 per mille in 1945. This is evidently due to the benefit of the Milk Supply Scheme started by the Corporation in May, 1945.

Out-Patient Clinics :—Out-patient clinics were held in all the centres by lady doctors where infants, pre-school children, expectant and nursing mothers were examined, advised and treated for minor ailments. 44,727 infants, 24,911 toddlers, 50,922 nursing mothers and 26,079 expectant mothers represent the new cases that were treated and advised. The total number of new cases that attended the clinics was 1,46,639 and the number of old cases was 3,19,311 and the grand total was 4,65,950. The dispensary conducted in the child welfare centres for one hour in the evenings for women and children was closed from 1-5-1946 as advised by the Government.

Ambulance :—As usual, an ambulance car was maintained for removing emergent cases of labour to hospitals in the city. As much difficulty was experienced whenever it went out of order, the need for a second van was keenly felt, especially owing to the expansion of the Scheme. Necessary provision was made for this purpose in the Budget for 1946-47. The new car was put on road in April, 1947. At present, there are two ambulance cars for the use of the Child Welfare Scheme.

Milk Supply :—The Milk Supply Scheme for distribution of milk in the child welfare centres to expectant and nursing mothers, infants and children upto the age of 5 years belonging to families, whose income was less than Rs. 50 p.m. which was introduced on 1-5-1945, continued in 1946. During the year, 8,576 infants, 4,870 toddlers, 4,840 expectant mothers and 2,434 nursing mothers were given milk free of cost. The supply of milk was made at a uniform rate of one ollock to all except infants under one year, who were given milk ranging from $\frac{1}{2}$ ollock to $1\frac{1}{2}$ ollocks according to their age in all the child welfare centres and 10 dispensaries in the Health Department till 31-12-1946 and discontinued with effect from 1-1-1947 as ordered by Government. The milk supply scheme was highly beneficial to women and children of the poorer classes and this is evidenced by a marked fall in the rate of infantile mortality from 141.9 per mille in 1945 to 102.8 per mille in 1946.

H. V. KAMALAMMAL

Lady Superintendent, C.W.S.

Corporation of Madras

Year	No. of centres	No. of wards	No. of births in wards	No. of deaths in wards	No. of city births	No. of births by C. W. S.	Percentage	Maternal mortality rate per mille	Infantile mortality rate per mille
1942	15	1	7	...	20,644	8,390	40.5	3.0	157.8
1943	15	1	75	...	29,498	11,236	38.1	2.4	150.9
1944	16	4	316	...	26,056	10,591	40.6	2.2	140.6
1945	17	8	1,873	1	30,549	14,002	45.3	1.57	141.9
1946	21	12	3,782	1	38,365	19,147	50.0	2.5	102.8

Showing births, deaths and infantile deaths registered in each division during 1946

APPENDIX

Divisions	Districts	Area in in Acres	Number of births registered			Number of deaths registered			Number of infantile deaths registered			Still births registered
			Males	Females	Total	Males	Females	Total	Males	Females	Total	
1	New Washermanpet	1674.11	379	323	702	317	301	618	92	99	191	24
2	Royapuram	284.42	372	387	759	272	227	499	103	73	176	21
3	Singara Garden	283.52	967	892	1859	540	540	1080	179	167	346	102
4	Sanjiviroyanpet	335.94	840	819	1659	598	515	1113	192	149	341	50
5	Korukupet	853.06	772	708	1480	610	544	1154	158	143	301	52
6	Harbour	98.94	286	255	541	199	150	349	62	65	127	18
7	Muthialpet	91.97	395	414	809	283	287	570	83	92	175	22
8	Kachaleeswarar Koil	204.80	199	150	349	124	111	235	38	26	64	15
9	Ammen Koil	67.26	380	359	739	269	240	509	77	57	134	35
10	Kothwal Bazaar	80.00	244	208	452	207	156	363	61	44	105	15
11	Seven Wells	95.42	533	478	1011	479	352	831	91	100	191	43
12	Sowcarpet	66.50	205	197	402	137	144	281	38	33	71	11
13	Peddu Naickenpet	149.25	654	546	1200	454	362	816	135	91	226	25
14	Trevelyan Basin	98.11	502	506	1008	329	299	628	105	96	201	48
15	Park Town	217.66	243	194	437	632	227	859	42	32	74	23
16	Edapalyam	69.76	301	297	598	212	188	400	57	55	112	24
17	Vyasarpady	1339.58	807	771	1578	579	527	1106	192	151	343	73
18	Perambur	1224.13	646	592	1238	322	324	646	95	88	183	36
19	Choolai	220.70	891	856	1747	518	485	1003	143	135	278	56
20	Kosapet	334.81	558	494	1052	332	305	637	92	67	159	40
21	Purasawalkam	747.20	551	585	1136	385	358	743	81	98	179	41
22	Kilpauk	558.98	321	355	676	184	164	348	49	51	100	13
23	Vepery	362.69	519	544	1063	326	322	648	82	62	144	40
24	Napier Park	126.72	322	316	632	204	183	387	70	42	112	30
25	Chintadripet	88.58	478	433	911	302	281	583	88	68	156	32
26	Komaleswaranpet	203.57	525	476	1001	291	284	575	76	86	162	36
27	Egmore	494.66	613	547	1160	185	213	398	78	51	129	85
28	Thousand lights	863.68	464	452	916	281	247	528	83	78	161	30
29	Nungambakkam	884.54	298	291	589	189	197	386	50	56	106	14
30	Pudupakkam	143.23	502	442	944	345	319	664	98	90	188	42
31	Thiruvatteeswaranpet	736.70	666	631	1297	439	396	835	135	126	261	60
32	Chepauk	191.81	557	527	1084	248	240	488	89	71	160	73
33	Triplicane	112.64	427	410	837	270	274	544	107	88	195	19
34	Zam Bazaar	89.02	382	386	768	327	285	612	100	88	188	27
35	Mirzahibpet	679.68	974	902	1876	696	635	1331	199	170	369	17
36	Rayapettah	535.10	551	526	1077	345	304	649	85	84	169	14
37	Teynampet	1052.61	508	426	934	310	278	588	110	83	193	34
38	Theagaroyanagar	1152.00	381	392	773	249	243	492	67	58	125	22
39	Mylapore	275.14	291	332	623	184	195	379	52	53	105	16
40	Adyar	1724.14	242	206	448	157	153	310	48	52	100	10
Total for Madras proper			19,746	18,619	38,365	13,330	11,855	25,185	3,782	3,318	7,100	1,388
Total for added areas			1,789	1,720	3,509	1,167	1,029	2,196	315	248	563	117
Total for Greater Madras			21,535	20,339	41,874	14,497	12,884	27,381	4,097	3,566	7,663	1,505

APPENDIX

Divisions	Districts	January	February	March	April	May	June	July	August	September	October	November	December	Total Births registered during the year
1	New Washrmanpet	36	44	45	59	63	47	66	60	72	45	75	90	702
2	Royapuram	41	49	39	59	77	64	82	44	87	76	71	70	759
3	Singara Garden	71	116	119	163	142	122	167	157	242	163	196	201	1,857
4	Sanjiviroyanpet	95	83	118	137	155	123	151	131	186	158	156	166	1,659
5	Korukupet	80	115	110	119	123	120	108	142	155	128	142	138	1,480
6	Harbour	35	33	43	46	39	55	53	48	54	44	40	51	541
7	Muthialpet	42	56	60	63	74	70	62	52	77	119	61	73	809
8	Kachaleeswarar Koil	11	23	29	40	29	23	37	29	22	38	23	36	349
9	Amnen Koil	39	37	58	61	66	58	58	69	75	85	56	77	739
10	Kothval Bazaar	17	25	39	39	39	35	50	42	43	40	37	46	452
11	Seven Wells	58	53	75	79	80	70	110	107	111	87	80	101	1,011
12	Sowcarpet	27	35	25	27	32	21	36	38	47	38	32	44	402
13	Peddu Naickenpet	67	67	80	108	107	95	129	105	95	62	175	110	1,200
14	Trevelyan Basin	48	52	63	81	89	81	104	112	110	86	85	97	1,008
15	Park Town	19	24	28	34	37	35	33	45	53	60	40	47	437
16	Edapalayam	31	34	35	56	43	32	54	65	84	60	51	53	598
17	Vyasarpady	81	95	114	131	144	138	161	136	147	157	139	135	1,578
18	Perambur	52	70	93	121	94	88	104	92	119	142	106	157	1,238
19	Choolai	94	125	120	135	160	124	134	150	171	175	166	193	1,747
20	Kosapet	56	79	68	110	97	68	125	87	104	86	86	86	1,052
21	Purasawalkam	58	64	91	81	71	85	100	111	100	82	108	185	1,136
22	Kilpauk	38	66	49	78	62	27	60	48	80	54	62	52	675
23	Vepery	58	67	69	79	84	84	109	89	110	96	112	106	1,063
24	Napier Park	33	42	54	62	46	37	58	67	63	66	49	55	632
25	Chintadripet	49	67	61	79	74	69	76	102	88	95	74	86	911
26	Komaleeswaranpet	41	77	88	83	79	49	133	77	88	95	96	95	1,001
27	Egmore	61	84	62	93	87	50	122	112	133	104	122	130	1,160
28	Thousand lights	51	69	53	78	56	77	88	93	88	83	92	88	916
29	Nungambakkam	20	39	36	40	48	53	60	86	50	42	58	57	589
30	Pudupakkam	53	57	65	71	71	63	84	101	107	104	77	91	944
31	Thiruvatteeswaranpet	76	77	99	98	73	96	125	155	132	112	120	134	1,297
32	Chepauk	61	63	80	87	82	70	110	95	163	134	86	113	1,084
33	Tripligane	55	49	46	80	71	43	80	93	81	69	79	91	837
34	Zam Bazaar	54	49	54	67	70	52	68	81	50	61	77	85	768
35	Mirzahibpet	111	120	111	210	189	116	182	183	151	130	187	186	1,876
36	Royapettah	100	74	61	96	67	81	116	97	109	84	93	99	1,077
37	Teynampet	54	48	67	54	70	83	87	101	107	90	73	100	934
38	Theagaroyanagar	38	42	55	60	70	56	78	66	72	84	78	74	773
39	Mylapore	29	30	40	48	80	49	51	69	53	60	57	57	623
40	Adyar	30	23	36	32	40	32	38	39	39	46	47	46	448
	Total for Madras proper	2,070	2,422	2,638	3,244	3,180	2,731	3,649	3,576	3,868	3,522	3,564	3,901	38,365
	Total for added areas	177	171	160	239	292	237	347	326	357	333	396	476	3,509
	Grand Total for Greater Madras	2,247	2,593	2,798	3,483	3,472	2,968	3,996	3,902	4,225	3,853	3,960	4,377	41,874

H—12

Divisions	Districts	January	February	March	April	May	June	July	August	September	October	November	December	Total Deaths registered
1	New Washermanpet	42	56	43	39	42	40	58	57	65	43	55	78	618
2	Royapuram	28	28	27	32	43	45	53	46	40	42	35	80	499
3	Singara Garden	87	106	76	73	70	60	116	70	110	103	87	122	1,080
4	Sanjeeviroyanpet	94	81	92	80	77	80	95	80	109	108	88	129	1,113
5	Korukupet	87	74	83	83	81	74	93	96	114	133	90	143	1,154
6	Harbour	35	28	32	17	29	31	22	29	32	48	23	23	379
7	Mutialpet	48	56	36	46	44	38	25	37	54	54	59	63	570
8	Kachaleswar Koil	18	18	16	15	14	18	20	25	18	21	17	35	235
9	Ammen Koil	43	39	36	41	42	22	42	49	57	50	34	54	509
10	Kothwal Bazaar	28	30	25	30	25	25	29	37	32	29	41	32	363
11	Seven wells	62	60	59	51	60	41	76	69	80	67	83	123	831
12	Sowcarpet	29	27	24	22	32	17	13	18	23	21	18	37	281
13	Peddu Naickenpet	71	64	62	67	66	57	60	59	77	62	80	91	816
14	Trevelyan Basin	53	46	50	51	48	45	50	41	57	71	43	73	628
15	Park Town	59	78	84	59	61	84	74	56	75	65	64	100	859
16	Edapalyam	40	21	25	33	36	35	33	25	40	30	38	44	400
17	Vyasarpady	88	79	82	84	110	79	99	99	95	104	74	113	1,106
18	Ferambur	56	48	48	44	41	43	51	52	62	64	56	81	646
19	Choolai	69	70	80	82	90	71	84	77	141	80	76	113	1,003
20	Kosapet	46	43	37	54	44	47	66	66	59	74	45	56	637
21	Purasawalkam	43	59	47	55	58	46	85	55	65	62	62	106	743
22	Kilpauk	31	25	24	26	22	29	42	32	33	16	24	44	348
23	Vepery	52	56	58	37	64	39	75	29	66	56	50	66	648
24	Napier Park	28	35	27	29	14	24	42	54	28	31	35	40	387
25	Chintadripet	46	62	34	37	47	42	43	49	63	47	46	67	583
26	Komaleswaranpet	39	42	49	41	53	35	65	47	58	43	48	55	575
27	Egmore	18	28	31	22	23	19	34	35	43	42	43	57	398
28	Thousand lights	46	41	33	40	41	47	45	60	33	35	44	63	528
29	Nungambakkam	33	33	27	21	34	35	41	31	34	26	35	36	386
30	Pudupakkam	45	51	54	62	63	51	61	60	47	54	47	69	664
31	Thiruvatteswaranpet	88	77	68	66	50	71	65	69	66	52	84	79	835
32	Chepauk	30	39	43	44	38	40	36	39	42	47	36	54	488
33	Triplicane	32	32	48	32	45	30	50	64	50	45	46	70	544
34	Zam Bazaar	55	62	49	46	49	35	47	55	50	43	44	77	612
35	Mirzahibpet	102	107	95	98	123	82	138	124	110	95	95	162	1,331
36	Royapettah	65	58	55	49	64	48	62	52	38	52	44	62	649
37	Teynampet	50	37	55	40	53	44	63	53	60	47	31	55	588
38	Theagaroyanagar	40	38	48	47	38	43	56	42	34	34	28	44	492
39	Mylapore	26	28	46	31	36	24	42	17	32	22	25	50	379
40	Adyar	28	16	28	24	23	22	26	32	24	22	29	36	310
Total for Madras proper		1,980	1,978	1,949	1,850	1,996	1,758	2,277	2,087	2,286	2,140	2,002	2,882	25,185
Total for added areas		155	160	147	158	168	149	233	182	214	187	175	268	2,196
Grand Total for Greater Madras		2,135	2,138	2,096	2,008	2,164	1,907	2,510	2,269	2,500	2,327	2,177	3,150	27,381

APPENDIX

Divisions	Names of Divisions	Under one year	1 to 5 years	5 to 10 years	10 to 15 years	15 to 20 years	20 to 30 years	30 to 40 years	40 to 50 years	50 to 60 years	Total of all ages			No of Deaths among Males to 100 deaths among females
											Males	Females	Total	
1	New Washermanpet	191	91	36	8	18	48	40	41	43	317	301	618	105.3
2	Royapuram	176	82	22	8	16	20	28	31	28	272	227	499	120.0
3	Singara Gardan	346	223	41	16	22	84	76	71	6	540	540	1080	100.0
4	Sanjeeviroyanpet	341	203	47	18	22	75	76	85	73	598	515	1113	116.1
5	Korukupet	301	224	62	27	17	89	96	97	168	610	544	1154	112.1
6	Harbour	127	55	10	5	9	26	21	25	17	199	150	349	132.6
7	Muthialpet	175	92	16	10	22	45	28	43	30	283	287	570	98.6
8	Kachaleeswarar Koil	64	35	9	4	10	14	21	17	15	124	111	235	111.7
9	Ammen Koil	134	83	21	6	13	48	25	43	37	269	240	509	112.1
10	Kothwal Bazaar	105	48	12	7	12	32	34	36	47	207	156	363	132.7
11	Seven Wells	191	88	29	28	26	97	96	89	66	479	352	831	136.1
12	Sowcarpet	71	34	13	2	8	20	29	19	37	137	144	281	45.1
13	Peddu Naickenpet	226	123	34	18	23	70	66	57	56	454	362	816	125.4
14	Trevelyan Basin	201	88	25	14	18	40	41	45	55	329	299	628	110.0
15	Park Town	74	62	37	42	35	120	141	140	106	632	227	859	278.4
16	Edapalayam	112	59	14	6	14	32	30	31	27	212	188	400	113.0
17	Vyasarpady	343	238	55	20	21	70	78	69	61	579	527	1106	110.0
18	Perambur	183	117	24	12	16	55	44	42	48	322	324	646	99.4
19	Choolai	278	195	51	18	33	64	63	77	67	518	485	1003	107.0
20	Kosapet	159	90	26	16	20	44	57	41	49	332	305	637	109.0
21	Purasawalkam	179	93	26	10	21	61	70	81	138	385	358	743	107.5
22	Kilpauk	100	45	14	10	4	36	33	16	66	184	164	348	112.2
23	Vepery	144	124	20	15	19	54	44	51	54	326	322	648	101.2
24	Napier Park	112	53	8	3	20	21	45	30	28	204	183	387	111.4
25	Chintadipet	156	90	18	11	24	55	47	37	41	302	281	583	107.5
26	Komaleeswaranpet	162	95	19	4	15	55	44	55	40	291	284	575	102.5
27	Egmore	129	33	11	11	18	51	33	35	31	185	213	398	87.0
28	Tnousand lights	161	85	18	6	11	43	30	36	34	281	247	528	114.0
29	Nungambakkam	106	57	14	4	4	31	16	33	16	189	197	386	96.0
30	Pudupakkam	188	99	28	14	21	52	37	49	55	345	319	664	108.1
31	Thiruvatteswaranpet	251	117	33	9	23	72	59	64	52	439	396	835	111.0
32	Chepauk	160	54	14	8	13	54	34	34	48	248	240	488	103.3
33	Trip illicane	195	81	23	12	12	36	29	33	37	270	274	544	98.5
34	Zam Bazaar	188	91	20	15	16	45	37	48	37	327	285	612	114.7
35	Mirzahibpet	369	259	58	17	34	100	110	86	101	696	635	1331	109.6
36	Royapettaah	169	98	28	11	27	47	51	54	52	345	304	649	113.5
37	Teynampet	193	101	31	18	14	35	41	33	24	310	278	588	111.5
38	Theagaroyanagar	125	101	27	10	11	35	35	18	30	249	243	492	102.5
39	Mylapore	105	58	11	8	8	27	23	28	34	184	195	379	94.4
40	Adyar	100	44	15	3	4	16	23	23	30	157	153	310	103.0
Total for Madras proper		7,100	4,008	1,020	484	694	2,019	1,931	1,943	1,811	13,330	1,1855	25,185	112.4
Total for added areas		563	339	110	50	64	176	169	153	167	1,167	1,029	2,196	113.4
Grand Total for Greater Madras		7,663	4,347	1,130	539	758	2,195	2,100	2,096	1,978	14,497	12,884	27,381	112.5

Showing deaths from principal diseases registered in each Division during 1946.

Divisions	Districts	Cholera	Small-pox	Measles	Enteric	Malaria	Other Fevers	Dysentery and Diarrhoea	Tubercle including Tubercle of lungs	Other Respiratory Diseases	Injuries	Maternal Deaths	All other causes	Total Deaths registered during the Year
1	New Washermanpet	...	15 } 6 }	...	1	...	126	93	4	106	8	3	236	618
2	Royapuram	...	...	...	3	...	115	69	5	137	4	...	166	499
3	Singara Garden	...	11	...	1	...	228	153	13	245	7	6	416	1080
4	Sanjeeviroyanpet	...	8	...	9	1	113	154	5	299	6	16	505	1113
5	Korukupet	...	4	...	...	...	94	161	4	362	6	4	519	1154
6	Harbour	...	8	...	1	...	52	41	3	107	2	1	134	349
7	Muthialpet	...	8	...	1	...	101	24	11	170	...	...	255	570
8	Kachaleswarar Koil	...	...	...	...	3	60	16	1	41	3	5	106	235
9	Ammen Koil	...	2	...	...	...	65	65	9	131	3	4	230	509
10	Kothwal Bazaar	...	3	...	1	1	85	13	3	122	5	2	128	363
11	Seven Wells	...	2	...	3 } 4 }	4	48	71	29	207	10	5	448	831
12	Sowcarpet	...	1	...	2	1	33	22	3	64	...	1	154	281
13	Peddu Naickenpet	...	3	...	5	1	53	74	7	215	10	2	446	816
14	Trevelyan Basin	...	1	...	4	...	44	54	12	116	7	1	389	628
15	Park Town	...	4	...	7 }	6	31	52	24	103	59	3	570	559
16	Edapalayam	...	2	...	...	2	23	22	8	90	5	...	248	400
17	Vyasarpady	...	4	...	4	...	188	158	18	283	2	...	449	1106
18	Perambur	...	...	...	4	...	102	81	22	130	3	1	293	646
19	Choolai	...	6	...	5	...	46	152	27	213	6	3	542	1003
20	Kosapet	...	3	...	4	1	47	66	18	121	12	2	363	637
21	Purasawalkam	...	2	...	...	...	95	91	24	128	7	7	379	743
22	Kilpauk	...	3	...	1	1	49	40	5	68	2	2	177	348
23	Vepery	...	...	...	1	1	60	54	3	129	3	2	394	648
24	Napier Park	1	2	...	1	...	27	45	3	77	2	4	221	387
25	Chintadripet	...	2	...	3	1	89	58	4	110	4	...	312	583
26	Komaleswaranpet	...	3	...	3	2	87	79	3	96	3	6	293	575
27	Egmore	...	...	...	4	3	19	36	5	87	2	6	236	398
28	Thousand Lights	...	3	...	...	...	20	129	5	152	1	...	218	528
29	Nungambakkam	...	1	...	1	...	11	69	11	87	...	...	266	386
30	Pudupakkam	...	5	...	3	...	52	30	9	94	11	1	459	664
31	Thiruvatteeswaranpet	...	4	...	3	1	26	33	3	108	9	2	646	835
32	Chepauk	...	1	...	5	...	19	19	5	71	8	2	358	488
33	Triplicane	...	8	...	2	1	18	16	4	63	11	3	418	544
34	Zam Bazaar	...	4	...	...	...	14	17	3	81	3	...	490	612
35	Mir Zabibpet	...	27	...	3	1	57	134	7	360	8	14	720	1331
36	Royapettah	...	4	...	6	...	21	56	15	167	8	3	369	649
37	Teynampet	...	1	...	...	3	62	92	6	106	12	7	299	588
38	Theagarayanagar	...	5	...	2	...	30	87	3	75	4	1	285	492
39	Mylapore	...	5	...	2	...	15	46	2	111	5	3	200	379
40	Adyar	...	6	...	1	...	15	41	1	81	6	2	157	310
Total for Madras proper		1	177	...	97	37	2,440	2,713	352	5,523	267	124	13,454	25,185
Total for added areas		...	7	...	10	8	308	297	53	355	24	25	1,111	2,198
Grand Total for Greater Madras		1	184	...	107	45	2,748	3,010	405	5,878	291	149	14,565	27,383

VITAL STATISTICS

STATEMENT No. VI

48

Showing births, deaths and infantile deaths and rates for principal communities in 1946 compared with 1945 in Madras proper

APPENDIX

Community	Population according to the census of 1941	1946						1945					
		Births	Birth Rate	Deaths	Death Rate	Infantile Deaths	Infantile Death Rate	Births	Birth Rate	Deaths	Death Rate	Infantile Deaths	Infantile Death Rate
European	2,804	44	15.69	13	46.4	2	45.45	49	17.48	27	9.63	1	20.41
Anglo-Indian	9,610	484	50.36	211	21.96	42	86.78	454	47.24	219	22.79	33	72.70
Indian Christian	45,760	2,271	49.63	1,214	26.53	322	141.78	1,811	39.58	1,242	27.14	286	157.92
Hindu	6,21,049	31,427	50.60	20,795	33.48	58,53	186.24	24,812	39.95	22,573	36.35	5,371	216.47
Muslim	95,702	4,123	43.08	2,944	30.76	881	213.68	3,419	35.73	3,210	33.54	841	245.98
Others	2,556	16	6.26	8	3.13	...	...	4	1.56	6	0.23	...	...
Total	7,77,481	38,365	49.35	25,185	32.40	7,100	185.06	30,549	39.29	27,277	35.08	6,532	213.82

VITAL STATISTICS

STATEMENT No. VII

Showing births, deaths and infantile deaths with rates by months in 1945 and 1946 in Madras proper

H | 33	Months	1946						1945					
		Births	Birth Rate	Deaths	Death Rate	Infantile Deaths	Infantile Death Rate	Births	Birth Rate	Deaths	Death Rate	Infantile Deaths	Infantile Death Rate
	January	2,070	29.3	1,980	28.1	522	252.17	1,783	25.7	2,902	41.8	708	397.1
	February	2,422	34.3	1,978	28.1	540	222.96	1,580	22.7	2,647	38.1	569	360.1
	March	2,638	37.4	1,949	27.6	506	191.81	2,191	31.6	2,546	36.7	469	214.1
	April	3,244	46.0	1,850	26.2	486	150.1	2,054	29.6	2,332	33.6	555	270.2
	May	3,180	45.1	1,996	28.3	569	180.0	2,120	30.5	2,217	31.9	507	239.1
	June	2,731	38.7	1,758	24.9	494	180.9	2,851	41.0	2,053	29.6	489	171.5
	July	3,649	51.7	2,277	32.3	737	202.0	2,458	35.4	1,939	27.9	440	179.0
	August	3,576	50.7	2,087	29.6	622	174.0	2,918	40.8	1,892	27.2	493	169.0
	September	3,868	54.8	2,286	32.4	629	162.6	2,671	38.4	1,983	28.5	486	181.9
	October	3,522	49.9	2,140	30.3	581	164.9	3,161	45.5	2,171	31.2	538	170.2
	November	3,564	50.5	2,002	28.4	585	164.1	2,797	40.2	2,071	29.7	589	210.6
	December	3,901	55.3	2,882	40.8	829	212.5	3,965	57.0	2,524	36.6	689	173.8
	Total	38,365	45.29	25,185	29.74	7,100	185.06	30,549	36.63	27,277	32.71	6,532	213.82

VITAL STATISTICS
STATEMENT No. VIII
Showing percentage of infantile deaths from principal causes in 1946 in Madras proper

Age-periods	Small-pox		Measles		Malaria		Other Fevers		Dysentery and Diarrhoea		Premature Birth, Debility		Nervous system		Respira-tory system		All other causes		Total Infantile Deaths	
	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio
Under seven days ...	...	...	...	...	...	...	17	1.10	18	1.16	1221	78.47	41	2.63	65	4.18	194	12.46	1556	21.92
Seven days and under one month ...	...	...	...	...	...	...	27	2.51	58	5.39	752	69.90	54	5.01	138	12.83	47	4.36	1076	15.15
One month and under six months ...	6	0.23	...	...	...	...	138	5.22	347	13.12	315	11.91	329	12.44	922	34.85	588	22.23	2645	37.25
Six months and under one year ...	11	0.60	...	...	...	...	407	5.87	319	17.49	34	1.86	134	7.35	849	46.59	369	20.24	1823	25.68
Total ...	17	0.24	...	...	...	...	289	1.07	742	10.45	23.22	32.70	558	7.86	1974	27.80	1198	16.88	7,100	...

VITAL STATISTICS

STATEMENT No. IX

Showing deaths from principal causes of death during 1946 compared with deaths during the previous 5 years in Madras Proper

Year	Plague		Cholera		Small-pox		Measles		Malaria		Typhoid		Other Fevers		Dysentery and Diarrhoea		Tubercle including of Lungs		Other Respiratory diseases		Injuries		Maternal Deaths		All other causes		Total Deaths	
	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio	Deaths	Ratio
1941	5	0.006	1	0.001	30	0.04	206	0.26	2,302	2.94	3,838	4.91	572	0.73	6,523	8.34	239	0.31	285	8.69	13,709	17.53	27,710	35.44
1942	90	0.11	18	0.02	..	....	27	0.03	128	0.16	1,341	1.69	2,251	2.83	301	0.38	4,093	5.15	209	0.26	154	7.46	9,113	11.47	18,019	22.67
1943	1	0.001	400	0.49	13	0.016	4	0.005	67	0.08	90	0.11	2,345	2.90	3,521	4.36	398	0.49	7,857	9.73	276	0.34	275	9.32	14,953	18.51	30,366	37.59
1944	16	0.02	128	0.16	1	0.001	82	0.10	66	0.08	2,687	3.27	3,498	4.26	290	0.35	7,166	8.73	202	0.25	178	6.83	15,318	18.66	29,705	36.19
1945	19	0.07	192	0.23	2	0.002	46	0.06	95	0.11	2,963	3.55	3,003	3.60	410	0.49	6,009	7.21	313	0.39	155	5.07	13,987	16.77	27,277	32.92
Mean of the last 5 years	105	0.14	71	0.086	2	0.002	50	0.062	117	0.144	2,328	2.87	3,222	3.99	394	0.49	6,330	7.83	248	0.31	209	7.47	13,416	16.59	26,655	32.92
1946	1	0.001	162	0.19	....	....	37	0.04	87	0.10	2,440	2.88	2,713	3.20	352	0.41	5,523	6.52	267	0.32	124	3.23	13,454	15.89	25,185	29.74

VITAL STATISTICS

STATEMENT No. X

Showing births, deaths, infantile deaths and the principal causes of deaths in 1946 and previous 10 years

Year	Births		Deaths		Infantile Deaths under one year		Plague		Cholera		Small-pox		Measles		Typhoid		Malaria		Other fevers		Diarrhoea and dysentery		Tubercle including Lungs		General respiratory diseases		Injuries		Maternal deaths		All other causes		
	No. of live Births registered.	Birth Rate	No. regd. excluding still births	Death Rate	Still Births	Deaths	Death Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate		
1936	29189	40.50	23660	32.8	1415	6318	216.5	..	..	140	0.19	3	0.004	5	0.007	163	0.23	113	0.16	1799	2.50	2208	3.10	1136	1.60	6410	8.90	232	0.30	294	10.1	11157	...
1937	30958	42.10	25674	34.9	1400	6836	220.8	..	..	232	0.32	196	0.27	8	0.01	96	0.13	78	0.11	2036	2.80	2133	2.90	1155	1.60	6676	9.10	170	...	289	9.30	12605	...
1938	30985	41.30	26282	35.0	1321	6881	222.1	..	..	36	0.05	561	0.70	8	0.01	119	0.16	50	0.07	2183	2.90	2308	3.10	1301	1.70	6088	8.10	215	...	284	9.20	13102	...
1939	31665	41.34	29808	38.92	1402	7651	241.62	..	..	20	0.003	268	0.35	...	...	187	0.23	43	0.06	2108	2.75	3624	4.73	1400	1.83	7166	9.36	254	...	245	7.74	14511	...
1940	33238	43.23	26125	33.98	1403	6837	205.70	..	..	...	...	31	0.04	20	0.003	125	0.16	29	0.04	1918	2.49	3352	4.36	1064	1.38	6016	7.83	234	0.30	264	7.94	13090	17.03
1941	32770	41.91	27710	35.44	1237	6847	208.94	..	..	...	..	50	0.006	10	0.001	206	0.26	30	0.04	2302	2.94	3838	4.91	572	0.73	6523	8.34	239	0.30	285	8.69	13709	17.53
1942	20644	25.97	18019	22.67	840	4062	196.76	..	..	90	0.11	18	0.02	..	...	128	0.16	27	0.03	1341	1.69	22	1.2	301	0.38	4093	5.15	209	0.30	154	7.46	9113	11.47
1943	29498	36.51	30366	37.59	1071	7295	247.30	1	0.001	400	0.49	130	0.016	4	0.005	90	0.11	67	0.08	2345	2.50	3521	4.36	398	0.49	7857	9.73	276	0.30	275	9.32	14953	18.51
1944	26056	31.74	29705	36.19	1062	7407	284.27	..	..	16	0.02	128	0.16	10	0.001	66	0.08	82	0.10	2687	3.27	3498	4.26	290	0.35	7166	8.73	202	0.30	178	6.83	15318	18.66
1945	30549	36.63	27277	32.71	1107	6532	213.82	..	..	19	0.07	192	0.23	20	0.002	95	0.11	46	0.06	2963	3.55	3003	3.60	410	0.49	6009	7.21	313	0.39	155	5.07	13987	16.77
1946	38365	45.29	25185	29.74	1388	7100	185.06	..	..	1	0.001	177	0.12	...	...	97	0.10	37	0.04	2440	2.88	2713	3.20	352	0.41	5523	6.52	267	0.32	124	3.23	13454	15.89

Meteorological data of Madras (Meenambakkam) for 1946. Lat 13°04' N Long 80°15. E

Months	TEMPERATURES												Humidity		Wind		Rain fall									
	Barometric pressure reduced to 215 A standard gravity and Mean sea level Hours 08.00 1700		Mean Max		Mean Min		Mean daily range cols 4.5 17.0		Mean daily temp cols 1(4+5) 0800 1700		Dew point hours 0800 1700		Mean Max solar radiation		Difference between Dew point temp & Mean temp.		Percentage of humidity hours 0800 1700		Mean direction of wind in from North 0800 1700		Total for the month inches		Heaviest rainfall in 24 hours inches		Number of rainy days 0.10" and over	
			Mean Max	Mean Min	Mean daily range cols 4.5 17.0	Mean daily temp cols 1(4+5) 0800 1700	Dew point hours 0800 1700	Mean Max solar radiation	Difference between Dew point temp & Mean temp.	Percentage of humidity hours 0800 1700	Mean direction of wind in from North 0800 1700	Total for the month inches	Heaviest rainfall in 24 hours inches	Number of rainy days 0.10" and over												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19								
January	1015.8	1012.8	82.3	65.1	17.2	73.7	63	61	...	10.7	12.7	82	56	321	39	0.93	0.78	2								
February	1014.5	1011.2	86.3	69.3	17.0	77.8	69	67	...	8.8	10.8	87	61	303	82	0.00	0.00	...								
March	1011.9	1008.4	91.3	74.5	16.8	82.9	73	71	...	9.9	11.9	84	63	227	124	0.58	0.42	2								
April	1010.7	1006.4	94.2	79.0	15.2	86.6	76	74	...	10.6	12.6	76	63	199	138	0.06	0.06	...								
May	1006.8	1002.9	101.2	82.5	18.7	91.9	73	72	...	18.9	19.9	62	53	233	132	1.40	1.14	3								
June	1005.3	1001.4	97.5	80.8	16.7	89.1	72	71	...	17.1	18.1	65	52	250	138	3.05	0.81	9								
July	1006.1	1002.5	97.0	79.5	17.5	88.3	71	70	...	17.3	18.3	67	51	259	156	2.24	1.05	5								
August	1006.2	1002.1	93.7	78.0	15.7	85.9	72	71	133.9	13.9	14.9	74	57	239	165	5.49	1.16	12								
September	1008.8	1004.9	92.5	76.2	16.3	84.3	74	74	140.9	10.3	10.3	79	68	249	129	7.45	3.38	8								
October	1010.2	1007.1	89.2	75.8	13.4	82.5	75	74	132.8	7.5	8.5	87	76	273	93	9.80	2.31	12								
November	1011.6	1008.8	84.8	74.9	9.9	79.9	75	75	125.6	4.9	4.9	92	82	45	71	23.59	7.53	14								
December	1012.2	1009.5	81.5	72.2	9.3	76.9	72	71	118.1	4.9	5.9	92	79	11	38	27.53	3.79	15								
Year	1010.0	1006.5	91.0	75.7	15.3	83.3	72	71	130.3	11.3	12.3	79	63	...	...	82.12	7.53	82						

VACCINATION

Showing vaccinations performed during each month in 1946

APPENDIX

Month	Primary Vaccination						Re-Vaccination					
	Number of persons Vaccinated			Results			Number of persons Re-Vaccinated			Results		
	Males,	Females	Total	Success-ful.	Un-success-ful	Un-known	Males	Females	Total	Success-ful	Un-success-ful	Un-known
January	1,360	1,325	2,685	2,667	6	12	22,165	24,909	47,074	1,083	29,270	16,721
February	1,522	1,526	3,048	3,033	2	13	28,714	25,981	54,695	1,098	35,834	17,763
March	1,550	1,381	2,931	2,907	7	17	21,372	21,489	42,861	1,127	27,480	14,254
April	1,354	1,329	2,683	2,672	....	11	12,619	11,190	23,809	693	15,327	7,789
May	1,303	1,241	2,544	2,535	....	9	9,100	7,847	16,947	445	11,661	4,841
June	1,237	1,208	2,445	2,429	4	12	8,123	7,287	15,410	398	10,289	4,723
July	1,241	1,212	2,453	2,440	1	12	8,052	7,918	15,970	467	11,443	4,060
August	1,281	1,299	2,580	2,568	1	11	6,298	7,461	13,759	523	9,954	3,282
September	1,406	1,323	2,729	2,717	...	12	11,186	9,451	20,637	437	13,576	6,624
October	1,279	1,244	2,523	2,522	1	...	8,949	7,206	16,155	353	10,271	5,531
November	1,206	1,114	2,320	2,320	....	...	5,129	4,145	9,274	262	5,704	3,308
December	1,173	1,025	2,198	2,197	1	....	4,287	3,583	7,870	248	5,007	2,615
Total for Madras proper	15,912	15,227	31,139	31,007	23	109	1,45,994	13,8,467	2,84,461	7,134	18,5,816	91,511
Total for added areas	1,216	1,162	2,378	2,307	9	62	5,943	4,822	10,765	1,105	6,949	2,711
Grand Total for Greater Madras	17,128	16,389	33,517	33,314	32	171	1,51,937	1,43,289	2,95,226	8,239	1,92,765	94,222

Showing particulars of vaccination performed in each of the divisions during 1946

APPENDIX

Divisions	Names of Divisions	Total No. persons Vaccinated			Primary Vaccination					Re-vaccination				Percentage of successful cases in which the results were known					
		Males	Females	Total	Total		Successful			Total		Result							
					Males	Females	Total	Under one year of age	One year and under 6 years	6 years and above	Total	Unknown	Males	Females	Total	Successful	Unknown	Primary	Revac- nation
1	New Washermanpet	3293	2324	6217	259	234	493	340	143	10	493	...	3034	2690	5724	111	3032	100.0	6.9
2	Royapuram	2325	2945	5270	344	326	670	471	194	5	670	...	1981	2619	4600	123	2355	100.0	5.5
3	Singara Garden	4947	4508	9455	547	549	1096	797	290	9	1096	...	4400	3959	8359	224	4497	100.0	5.8
4	Sanjiviroyanpet	6507	7960	14467	593	587	1180	949	218	12	1179	...	5914	7373	13287	729	3424	99.9	7.4
5	Korukupet	5629	6810	12439	617	550	1167	871	288	8	1167	...	5012	6260	11272	615	2948	100.0	7.4
6	Harbour	3578	2480	6058	221	219	440	351	77	12	440	...	3357	2261	5618	54	2593	100.0	1.8
7	Muthialpet	4320	3754	8074	349	358	707	521	142	44	707	...	3971	3396	7367	124	2482	100.0	2.6
8	Kachaleeswarar Koil	4095	2122	6217	175	161	336	264	67	5	336	...	3920	1961	5881	58	2585	100.0	1.8
9	Ammen Koil	2845	2207	5052	267	252	519	418	84	17	519	...	2578	1955	4533	44	1777	100.0	1.6
10	Kothwal Bazaar	1928	1645	3573	209	197	406	355	48	3	406	...	1719	1448	3167	34	1315	100.0	2.3
11	Seven Wells	3238	2630	5868	348	353	701	586	110	5	701	...	2840	2277	5117	90	1297	100.0	...
12	Sowcarpet	3443	2364	6107	190	181	371	244	127	...	371	...	3253	2483	5736	89	2263	100.0	1.5
13	Peddu Naickenpet	4029	3052	7081	535	541	1076	817	259	...	1076	...	3494	4511	8005	89	2263	100.0	2.8
14	Trevelyan Basin	4101	3559	7660	411	424	835	691	130	11	832	...	3690	3135	6825	131	2074	99.8	2.7
15	Park Town	3353	1410	4763	209	237	446	324	100	21	445	...	3144	1173	4317	98	675	99.8	4.8
16	Edapalayam	2869	2232	5101	266	264	530	413	89	28	530	...	2603	1968	4571	166	1108	100.0	2.3
17	Vyasarpady	6877	7874	14751	601	594	1195	1004	185	6	1195	...	6276	7280	13556	129	8021	100.0	1.8
18	Perambur	8694	5542	14136	478	500	978	826	141	11	978	...	8216	4942	13158	46	10517	100.0	5.1
19	Choolai	5812	6685	12497	647	660	1307	1101	119	8	1228	...	5165	6025	11190	347	4421	99.8	2.3
20	Kosapet	3573	4527	8100	423	419	842	688	118	9	815	...	3150	4108	7258	112	2412	99.5	3.4
21	Purasawalkam	3196	3797	6993	434	399	833	596	221	13	830	...	2762	3398	6160	158	1556	99.6	3.4
22	Kilpauk	2396	2378	4774	306	300	606	414	150	42	606	...	2090	2078	4168	101	789	100.0	3.0
23	Vepery	3776	3953	7729	440	429	869	741	118	10	869	...	3336	3524	6860	688	984	100.0	12.0
24	Napier Park	4142	2281	4423	281	262	543	421	105	11	537	...	3861	2019	5880	47	1625	95.5	1.1
25	Chintadripet	3212	2529	5841	369	323	692	501	164	26	691	...	2843	2306	5149	84	1187	100.0	2.1
26	Komaleswaranpet	3512	2917	6429	414	345	759	563	153	41	757	...	3098	2572	5670	130	1138	100.0	3.0
27	Egmore	2203	1841	4044	255	241	496	421	64	8	493	...	1948	1600	3548	108	937	99.4	4.0
28	Thousand lights	2572	2693	5265	364	342	706	602	100	4	706	...	2208	2356	4569	19	1670	100.0	1.0
29	Nungambakkam	2055	2299	4354	310	320	630	463	156	11	630	...	1745	1970	3715	10	1777	100.0	1.0
30	Pudupakkam	3224	4315	7539	441	399	840	651	160	29	840	...	2786	3936	6719	145	1412	100.0	2.7
31	Thiruvatteeswaranpet	3989	5600	9589	529	446	975	815	147	13	975	...	3460	5154	8614	179	2364	100.0	2.9
32	Chepauk	3438	3220	6658	360	364	724	487	220	17	724	...	3078	2856	5934	189	598	100.0	3.6
33	Triplicane	4264	3776	8040	353	367	720	499	208	13	720	...	3911	3409	7320	179	828	100.0	2.8
34	Zam Bazaar	2940	4061	7001	362	406	768	573	165	30	768	...	2578	3655	6233	134	1445	100.0	3.0
35	Murzahibpet	13961	11841	25806	926	836	1762	842	700	219	1761	...	13035	11009	24044	644	4890	99.9	3.4
36	Rayapettah	4628	4373	9001	664	551	1215	845	348	22	1215	...	3964	3822	7786	241	1411	100.0	3.8
37	Teynampet	3374	3709	7083	442	395	837	603	214	18	835	...	2932	3314	6246	227	474	100.0	4.0
38	Theagaroyanagar	3681	3740	7421	370	357	727	453	251	23	727	...	3311	3383	6694	252	1343	100.0	4.7
39	Mylapore	2968	2359	5327	312	310	622	408	163	50	621	...	2656	2049	4705	148	1607	96.8	4.8
40	Adyar	2919	2467	5386	291	229	520	370	113	35	518	...	2628	2238	4866	127	1956	99.6	4.4
Total for Madras proper		1,61,906	1,53,694	315,600	15,912	15,227	31,139	23,299	6,849	859	31,007	109	145994	138467	284461	7134	31511	99.9	3.7
Total for added areas		7159	5984	13143	1216	1162	2378	1128	1081	90	2309	62	5943	4822	10765	1105	2711	99.6	13.7
Total for Greater Madras		1,69,065	1,59,678	328,743	17,128	16,389	33,517	24,427	7,938	7,938	33,314	171	151937	143289	295226	8239	94222	99.0	4.1

MEDICAL RELIEF

STATEMENT No. I

Showing cases treated in Corporation dispensaries in 1946

Serial number	Name of dispensary	Year in which the Dispensary was opened	New cases	Total no. of cases treated		No. of operations performed		Remarks
				1946	1945	1946	1945	
1	Royapuram Dispensary	1924	27,123	69,838	60,991	535	499	
2	Washermanpet Dispensary	1913	49,258	95,209	10,696	423	427	
3	Harbour „	1929	32,367	73,021	81,468	210	306	
4	Mannadi Unani „	1938	19,799	65,709	55,398	28	26	
5	Mafuskhan „	1923	32,482	66,787	77,904	103	112	
6	Mint Street „	1923	48,473	96,880	108,521	436	246	
7	Trevelyan Basin „	1919	33,604	71,664	60,342	49	71	
8	Perambur „	1928	38,114	77,028	51,563	113	250	
9	Vyasarpady „	1929	33,606	70,240	74,378	528	478	leprosy clinic attached
10	Kosapet „	1929	354,01	64,688	75,708	599	580	
11	Baliah Naidu „	1899	35,350	63,621	79,647	308	292	
12	Kilpauk „	1919	29,735	77,526	71,846	235	193	
13	Nungambakam „	1923	28,617	62,743	67,888	131	115	
14	Chintadripet „	1909	37,270	67,407	76,459	34	463	
15	Pudupakkam „	1924	27,338	62,187	69,200	176	199	
16	Triplicane „	1918	36,049	75,025	91,954	160	350	
17	Teynampet „	1927	25,290	51,662	54,670	217	176	
18	Thyagarayanagar „	1922	31,851	58,764	63,715	244	186	shifted from Pulianthope
19	Mylapore „	1924	44,492	82,289	94,176	423	535	
20	Pulianthope Unani „	1930	22,408	49,415	62,858	71	125	shifted from T'Nagar
21	Choolai Siddha „	1931	55,782	106,751	118,179	42	68	
22	Thousandlights (Ayurvedic) „	1930	32,895	60,400	34,783	491	308	
23	Thayar Sahib Street (Unani) „	1932	29,314	72,521	69,355	122	41	
24	Egmore „	1923	17,080	33,021	37,202	13	15	
25	Perambur Siddha „	1938	27,353	52,432	91,446	113	98	
26	Krishnampet „	1938	20,365	45,897	51,377	59	70	
27	Pudupet Unani „	1939	29,498	70,458	72,395	294	190	
28	Royapuram Siddha „	1945	30,457	59,756	51,358	9	....

Showing skin diseases and anti-leprosy work under the Corporation of Madras for the year 1946

Name of Institution	Date of opening	Details of anti-leprosy work										Skin diseases		Yearly total attendance new and old skin and leprosy cases	Average monthly attendance	
		New leprosy cases		Types	Results of treatment						No. of injections performed	No. of new skin cases	No. of injections performed			
					Infective	Non-infective	Number cured	Number improved	Number symptom free	Number condition arrested						Number "Otherwise"
Ice House Road Skin & Leprosy Clinic ...	2-2-1934	204	69	135	...	110	12	8	74	5,090	15,163	1,263	47,479	3,957		
Vyasarpady Leprosy Clinic ...	4-8-1931	99	21	78	...	19	1	4	75	3,307	1,926	...	6,922	577		
Other Corporation general Dispensaries ...	...	...	...	...	...	...	...	...	...	...	69,946	...	1,21,814	10,151
Total ...	...	303	90	213	...	129	13	12	149	8,397	87,035	1,263	1,76,215	14,685	

Showing the number of cases admitted, discharged and died during 1946
in the I. D. Hospital, Tondiarpet, Madras

Details	Small-pox	Chicken-pox	Measles	Cholera	Gastro enteritis	Mumps	Whooping cough	C. S. Meningitis	Diphtheria	Secondary Syphilis	Pneumonia	Malaria	Chronic Nephritis	Chronic enteritis	Dengue	Other diseases	Total
Patients in the hospital on 31st December 1945 midnight ...	45	67	1	...	...	2	...	1	...	...	...	...	...	...	...	16	132
Patients admitted for treatment from 1-1-46 to 31-12-46 ...	954	1654	112	2	259	72	...	28	10	16	6	...	...	...	6	460	3,579
Total number discharged	822	1709	111	1	220	73	...	25	9	15	...	...	...	...	6	408	3,399
Total number died	166	...	...	1	35	...	...	4	...	...	6	...	...	...	...	61	273
Mortality percentage ...	17%	...	...	50%	13.51%	...	...	14%	...	...	100%	...	...	...	...	7.4%	...
Patients in the Hospital on 31st December 1946 midnight ...	11	12	2	...	4	1	...	...	1	1	...	...	...	...	...	7	39

APPENDIX

No.	Defects	Boys						Girls						Remarks				
		Entrants			Regulars			Entrants			Regulars							
		No. Defective	Percentage		No. Defective	Percentage		No. Defective	Percentage		No. Defective	Percentage						
			1946-47	1945-46		1946-47	1945-46		1946-47	1945-46								
1	Malnutrition	1987	23.41	21.84	1665	16.92	21.03	3652	19.93	388	8.76	6.16	1032	13.26	5.72	1420	11.63	
2	Dirty head, body and nails	816	9.61	7.02	769	7.82	5.23	1585	8.65	57	1.29	1.96	52	0.67	1.04	109	0.89	
3	Teeth and mouth	1179	13.89	14.93	1391	14.14	16.67	2573	14.02	235	5.31	7.57	541	6.95	9.54	776	6.36	
4	Nose and throat	683	8.05	7.36	680	6.91	6.24	1363	7.44	233	5.26	6.80	811	10.42	10.16	1044	8.55	
5	Eye diseases	255	3.00	2.84	276	2.81	2.97	531	2.90	73	1.65	0.86	181	2.33	1.18	254	2.08	
6	Vision	21	0.25	0.28	44	0.45	0.06	65	0.35	2	0.05	0.04	6	0.08	0.04	8	0.07	
7	Ear diseases	46	0.54	0.85	76	0.77	0.95	122	0.67	31	0.70	0.57	94	1.21	0.82	125	1.02	
8	Hearing	1	0.01	0.01	1	0.01	0.04	2	0.01	...	...	...	2	0.03	0.01	2	0.02	
9	Speech	11	0.13	0.03	14	0.14	0.03	25	0.14	...	...	...	1	0.01	0.01	1	0.01	
10	Circulatory system	61	0.72	0.96	80	0.81	0.51	141	0.77	30	0.68	0.42	101	1.30	0.70	132	1.08	
11	Tuberculosis	...	...	...	2	0.02	...	2	0.01	...	...	...	1	0.01	0.01	1	0.01	
12	Respiratory system	79	0.93	1.25	45	0.46	1.10	124	0.68	14	0.32	0.92	61	0.78	1.24	75	0.61	
13	Abdominal organs	71	0.84	0.58	71	0.72	0.41	142	0.77	9	0.20	0.37	19	0.24	0.59	28	0.23	
14	Bones and joints	439	5.17	3.77	283	2.88	3.34	722	3.94	33	0.75	0.29	65	0.84	0.36	98	0.80	
15	Nervous & psychic systems	11	0.13	0.10	6	0.06	0.07	17	0.09	6	0.14	...	4	0.05	0.01	10	0.08	
16	Infectious & contagious diseases	822	9.68	10.99	910	9.25	11.13	1732	9.45	378	8.54	11.88	811	10.42	13.08	1189	9.74	
17	Other diseases and defects	214	2.52	2.34	198	2.01	2.12	412	2.25	34	0.77	0.79	115	1.48	0.73	149	1.22	
18	Vaccination	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Deformities	10	0.12	0.21	10	0.10	0.11	20	0.11	2	0.05	0.02	8	0.10	0.04	10	0.08	

MEDICAL INSPECTION

APPENDIX TO STATEMENT No. I

Group	No. on Roll		Average daily attendance		No. examined		No. defective		Percentage	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Entrants	22376	15798	16821	11929	8489	4427	3901	1363	45.95	30.79
Regulars					9837	7783	4454	3323	45.28	42.69
Total	22376	15798	16821	11929	18326	12210	8355	4686	45.59	38.38

MEDICAL INSPECTION

Treatment Table

STATEMENT No. II

Group	No. treated at Schools	No. sent to Corporation dispensaries	No. referred to Government Hospitals	No. referred to Govt. Ophthalmic Hospital	No. referred to Tuberculosis Institute	No. of parents met	No. of revisits paid to schools	No. of re-examinations of children
Boys	6788	408	1685	161	2	2054	437	29901
Girls	3622	643	269	28	1	867	250	6533
Total	10410	1051	1954	189	3	2921	687	36434

MEDICAL INSPECTION

Height and Weight Tables

STATEMENT No. III

Age	Average height in inches		Average weight pounds		Quinquennial average height in inches		Quinquennial average weight in pounds		Remarks
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
3	37.50	33.60	27.50	22.05	...	...	...	...
4	38.00	35.64	28.10	24.56	...	...	...	...
5	39.04	38.95	31.32	30.43	40.76	38.59	32.08	28.89	
6	41.42	40.90	33.94	32.03	41.24	40.90	33.26	30.93	
7	43.44	42.80	37.77	34.13	42.89	42.56	36.19	33.54	
8	44.89	44.50	40.62	36.11	44.94	45.15	38.67	36.81	
9	47.39	46.67	44.45	40.42	46.75	47.31	42.57	40.70	
10	49.15	49.17	46.47	43.35	46.68	49.20	45.91	45.10	
11	50.38	50.95	50.08	48.97	50.10	51.20	49.26	50.89	
12	51.98	52.83	53.29	53.61	51.65	53.00	53.60	55.47	
13	53.03	55.07	55.45	59.30	53.06	54.97	56.73	60.27	
14	54.73	56.59	61.46	65.29	54.61	58.89	60.12	68.83	
15	54.24	58.45	61.86	73.01	56.06	58.56	63.05	75.73	
16	54.89	59.34	68.35	87.41	...	...	...	...
17	59.35	59.42	72.44	80.75	...	...	...	...
18	60.43	61.00	88.64	95.00	...	...	...	...
19	62.25	60.50	85.55	82.00	...	...	...	...
20	63.30	60.00	93.10	100.00	...	...	...	...
21	62.25	...	91.00	...	...	...	...	...
22	63.50	...	91.00	...	...	...	...	...
23	64.50	...	110.00	...	...	...	...	...

Showing the progress of the sewer laying work for the year 1946

H—16

S. No.	Name of area	6" S. W. Pipe sewer	9" S. W. pipe sewer	12" S. W. pipe sewer	15" S. W. pipe sewer	9" C. I. Pipe sewer	12" C. I. pipe sewer	Total Length of sewers laid	No. of Man-holes	No. of House Connections	Remarks
1	Tondiarpet area	L. Ft. 823	L. Ft. 228	L. Ft. ...	L. Ft. ...	L. Ft. ...	L. Ft. ...	L. Ft. 1,051	Nos. 6	Nos. ...	
2	Royapuram area	382	337	...	...	...	...	719	5	...	
3	Perambur area	...	...	1,717	952	...	...	2,669	20	...	
4	Vyasarpady area	...	...	269	...	...	...	269	4	...	
5	Purasawalkam	2,123	2,076	...	...	318	...	4,517	11	263	
6	Greams Road area	307	2,003	...	...	...	658	2,968	17	...	
7	North Mylapore area	...	...	...	...	...	...	...	...	4	
8	Theagaroyanagar	9,478	17,255	...	...	493	...	27,226	175	...	
		13,113	21,899	1,986	952	811	658	39,419	238	267	

Length of sewers laid during 1946 = 39,419 ft. or 7.47 miles

SANITATION

STATEMENT No. II

Showing disposal of applications for licences in 1946

Serial No.	Description of trade	No. of cases dealt with	No. Sanctioned	No. Refused	No. pending
1	Aerated water and Ice Factories ...	29	29	...	...
2	Bakery, Sweetmeat & Coffee hotels	1668	1472	196	...
3	Candles and Soaps ...	39	36	3	...
4	Cocoanut fibre, Hemp and Jute ...	26	24	2	...
5	Cattle yards ...	1898	1712	169	17
6	Bones, Hoofs, Hair and Wool ...	41	39	2	...
7	Cart-Stands ...	32	29	3	...
8	Dairy produce ...	351	324	27	...
9	Flour ...	165	163	2	...
10	Gilding and Condiments ...	65	64	1	...
11	Hack-stables ...	34	34	...	...
12	Dyeing ...	157	153	4	...
13	Onions and Garlic ...	315	313	2	...
14	Oil and Oil Mills ...	751	738	13	...
15	Lodging houses ...	67	66	1	...
16	Markets ...	42	41	1	...
17	Meat ...	197	188	9	...
18	Spirits, Turpentine, Chemical and Rosin ...	783	764	19	...
19	Laundries ...	333	321	12	...
20	Fish and Fins ...	89	81	8	...
21	Skins, Hides and Leather ...	312	306	6	...
22	Paddy boiling ...	13	9	4	...
23	Sugar ...	9	8	1	...
24	Catgut, Offal and Tallow ...	13	13	...	...
25	Snuff ...	314	311	3	...
26	Cotton ...	297	294	3	...
27	Eating houses ...	3316	3218	98	...
28	Swine ...	...	...	...	...
29	Lime kilns ...	49	48	1	...
30	Beedy manufacturing ...	1388	1214	174	...
31	Manufacturing cigarettes or storing Tobacco ...	699	678	21	...
32	Camphor storing & boiling ...	54	49	5	...
33	Shaving Saloon ...	2148	2121	27	...
34	Husking of paddy ...	15	15	...	...
35	Groundnut Storage ...	476	443	33	...
36	Grains Storage ...	1118	1007	111	...
37	Gold refining ...	4	4	...	...
38	Poultry ...	27	27	...	...
	Total ...	17,334	16,356	961	17

Nature of samples	1946		1941		1942		1943		1944		1945	
	Number of samples analysed	Number of adulterated samples	No. of samples analysed	Percentage of adulterated samples	No. of samples analysed	Percentage of adulterated samples	No. of samples analysed	Percentage of adulterated samples	No. of samples analysed	Percentage of adulterated samples	No. of samples analysed	Percentage of adulterated samples
Milk	1227	793	283	30.4	365	27.1	380	46.8	456	45.0	1078	56.5
Butter	164	36	94	34.1	123	21.9	189	31.2	158	34.8	150	20.0
Ghee	464	31	706	39.3	520	28.3	703	24.3	658	13.2	451	13.7
Gingelly Oil	285	26	657	7.8	420	4.8	437	2.1	495	6.4	235	6.4
Groundnut Oil	33	6	153	18.3	98	16.3	116	...	87	6.9	31	6.5
Cocoanut Oil	347	108	1	100.0	43	4.7	42	...	14	...	33	21.2
Coffee Powder	79	...	48	2.1	129	39.9	83	19.3	69	11.6	53	5.7
Tea	21	...	29	...	45	...	30	...	21	...	5	...
Ghee Substitutes	23	11	8	37.5	9	44.4	61	36.1	67	34.3	52	64.3
Other Articles	22	12	11	36.4	3	...	19	63.2	13	38.5	9	66.7
Total	2665	1023	1990	24.3	1755	20.7	2060	25.7	2038	20.7	2097	36.3

APPENDIX

FOOD ANALYSIS

STATEMENT No. II

Nature of samples	Adulterated samples among the samples analysed in 1946						Adulterated samples of the previous year pending disposal on 1-1-1946						Total number of adulterated samples dealt with during 1946						Total fines imposed in 1946	Average fine per conviction in 1946	Number of convictions in 1946	Total fines imposed in 1945	Average fine per conviction in 1945
	Number of samples	Number of convictions	Number seized under Sec. 9 and forfeited or destroyed under Sec. 12 without prosecution	Number taken under Sec. 14, but acquitted, with- drawn or not prosecuted.	Number pending disposal on 31-12-1946	Number of samples	Number of convictions	No. seized under Sec. 9 and forfeited or destroyed under Section 12 without prosecution	Number taken under Sec. 14, but acquitted with- drawn or not prosecuted	Number pending dis-posal on 31-12-1946	Number of samples	Number of convictions	Number seized under Sec. 9 and forfeited or destroyed under Section 12 without prosecution	Number taken under Sec. 14, but acquitted with- drawn or not prosecuted	Number pending disposal on 31-12-1946								
Milk	793	546	...	41	206	122	117	...	...	5	915	663	...	41	211	30,411	46	514	28,987	56	
Butter	36	22	...	9	5	1	1	...	...	...	37	23	...	9	5	1,295	56	18	960	53
Ghee	31	10	9	...	12	6	6	...	...	...	37	16	9	...	12	1,104	69	20	1,520	76
Gingelly Oil	26	23	...	1	2	7	7	...	...	...	33	30	...	1	2	1,525	51	11	532	48
Groundnut Oil	6	3	...	3	...	...	...	...	...	...	6	3	...	3	...	130	43	2	120	60
Cocoanut Oil	108	38	...	5	65	6	5	...	1	...	114	43	...	6	65	2,325	54		
Coffee Powder	...	...	...	...	...	2	2	...	...	...	2	2	...	...	..	40	20	2	110	55
Tea		
Ghee Substitutes	11	...	11	11	...	11	2	60	30	...		
Other Articles	12	2	...	9	1	4	1	...	3	...	16	3	...	12	1	150	50		
Total	1023	644	20	68	291	145	139	...	4	5	1171	783	20	72	296	36,980	47	569	32,289	57			

Number	Description	Number of samples examined	Remarks
1	Complete bacteriological and chemical examination	1,084	....
2	Partial bacteriological and chemical examination	140	....
3	Microscopical examination of water from different places in the water supply system	60	....
4	Identification of algae	56	....
5	Culture media, etc., for determination and adjustment of pH	42	....
6	Samples of water tested for the presence of free chlorine, interfering substances, etc.	14,600	....
7	Examination of H ₂ S in filtered water samples	4,240	....
		20,222	

H-17

STATEMENT No II

WATER ANALYSIS

Chlorination data for 1946

Month	No. of sam- ples of water tested for free chlorine and for interfering substances	Quantity of water filtered in million gallons per day			Dose of chlorine in p. p. m.			Lbs. of liquid chlorine used per month	Cost of chlorine per lb.	Total cost of chlorine	Average No. of beds per day
		Max.	Min.	Mean	Max.	Min.	Mean				
January	1240	25.66	23.00	23.67	1.03	0.97	0.99	7334.50	0-10-6	Rs. a. p. 4813 14 3	9.6
February	1120	24.00	23.50	23.59	1.08	0.98	1.02	6699.25	"	4396 6 2	10.4
March	1240	24.16	23.66	23.89	1.06	0.97	1.00	7430.25	"	4876 1 8	10.5
April	1200	24.66	24.00	24.30	1.01	0.98	0.99	7278.00	"	4776 3 0	9.7
May	1240	25.00	23.66	24.29	1.04	0.98	1.00	7619.00	"	4999 15 2	10.0
June	1200	24.66	23.16	23.92	1.07	0.99	1.02	7213.50	"	4733 13 9	10.7
July	1240	24.66	23.00	24.14	1.36	1.01	1.14	8618.00	"	5655 9 0	10.3
August	1240	25.66	23.33	24.20	1.36	1.22	1.30	9810.00	"	6437 13 0	9.4
September	1200	23.66	22.16	22.98	1.53	1.34	1.44	10014.00	"	6571 11 0	8.4
October	1240	26.00	22.50	23.61	1.88	1.41	1.62	11162.00	"	7325 1 0	8.7
November	1200	24.83	24.16	23.65	1.92	1.24	1.51	10836.00	"	7111 2 0	8.7
December	1240	25.66	22.82	24.24	1.46	1.08	1.25	9064.00	"	5948 4 0	10.0
Average	1217.5	24.88	23.28	23.87	1.31	1.09	1.19	8589.87	0-10-6	5637 2 6	9.66

WATER ANALYSIS

STATEMENT No. III

Important Chemical Results in parts per 100,000

1946	Raw Water Kipauk End of conduit						Chlorinated Filtered Water						Test Tap Water K. P. S.							
Month	No. of samples	Smell	Ammoniacal Nitrogen	Albuminoid Nitrogen	Absorbed Nitrogen	Nitrates	Nitrites	No. of samples	Smell	Ammoniacal Nitrogen	Albuminoid Nitrogen	Absorbed Oxygen	Nitrates	Nitrites	No. of samples	Ammoniacal Nitrogen	Albuminoid Nitrogen	Absorbed Oxygen	Nitrates	Nitrites
January	24	..	0.003	0.040	0.144	..	..	24	..	0.002	0.028	0.112	Trace	..	24	0.002	0.022	0.107	Trace	..
February	22	..	..	0.033	0.146	..	..	22	..	0.002	0.024	0.098	"	..	22	0.002	0.023	0.097	"	..
March	23	..	..	0.034	0.170	..	..	23	..	0.002	0.024	0.122	"	..	23	0.002	0.024	0.121	"	..
April	22	..	..	0.034	0.185	..	..	22	..	0.003	0.028	0.138	"	..	22	0.004	0.028	0.135	"	..
May	24	..	..	0.034	0.194	..	..	25	..	—	0.027	0.151	"	..	25	..	0.026	0.149	"	..
June	24	..	..	0.050	0.220	..	..	24	..	—	0.041	0.178	"	..	24	..	0.040	0.174	"	..
July	27	..	..	0.053	0.242	..	..	27	..	0.012	0.047	0.195	"	..	27	0.013	0.047	0.190	"	..
August	30	..	0.004	0.076	0.257	..	..	30	..	0.004	0.072	0.209	"	..	30	0.003	0.072	0.208	"	..
September	24	..	0.004	0.090	0.275	..	..	24	..	0.004	0.077	0.221	"	..	24	0.004	0.074	0.221	"	..
October	24	..	0.003	0.081	0.256	..	..	24	..	0.003	0.065	0.187	"	..	26	0.003	0.064	0.191	"	..
November	25	..	0.003	0.059	0.172	..	..	25	..	0.002	0.046	0.112	"	..	25	0.003	0.043	0.110	"	..
December	16	..	0.002	0.033	0.143	..	..	16	..	0.002	0.025	0.079	"	..	16	0.002	0.002	0.075	"	..

WATER ANALYSIS

STATEMENT No. IV

Results of bacteriological examination of Red Hills

Lake water

Months	No. of samples	Lactose fermenters in						
		—60 c.c.	+60 c.c.	+20 c.c.	+10 c.c.	+5 c.c.	+1 c.c.	+0.1 c.c.
January	12	...	...	...	8.3%	41.7%	50 %	...
March	3	...	...	...	...	100 %	...	...
June	5	...	...	...	...	20 %	80 %	...
September	5	...	...	...	...	100 %	...	...

Results of a complete chemical analysis of Red Hills Lake water in parts per 100,000

81—H

Source	Date of collection	Colour and Transparency	Smell	Ammoniacal Nitrogen	Albuminoid Nitrogen	Absorbed oxygen	Nitric Nitrogen (Nitrate)	Nitrous Nitrogen (Nitrite)	Dissolved oxygen	Dissolved solids	Fixed solids	Iquitable matter	Total solids	Suspended matter	Permanent Hardness	Temporary Hardness	Total Hardness	Alkalinity to Phenolphthalein	Alkalinity to Methyl Orange	Total Alkalinity	Chlorides	Phosphates	Silicates	Sulphates	Level	Lake
Red Hills Lake	4-9-1946	Yellowish and opaque	--	--	0.077	0.272	--	--	10.5 c.c. per litre	33.0	--	--	34.5	1.5	2.5	7.5	10.0	0.56	6.18	6.74	8.7	--	--	--	36.6 ft.	
Red Hills Lake	27-6-1946	Yellowish and opaque	--	--	0.045	0.227	--	--	6.1 c.c. per litre	29.0	--	--	32.0	3.0	7.0	6.0	13.0	--	6.16	6.16	7.3	--	--	2.35	38.06 ft.	
Red Hills Lake	25-3-1946	Yellowish and opaque	--	--	0.033	0.171	--	--	9.1 c.c. per litre	28.0	24.0	4.0	--	--	6.0	3.0	9.0	--	4.84	4.84	6.1	--	1.2	1.93	43.13 ft.	
Red Hills Lake	5-1-1946	Yellowish and opaque	Nil	0.003	0.027	0.156	--	--	4.5 c.c. per litre	18.0	--	--	23.0	5.0	6.5	7.5	14.0	--	4.48	4.48	5.2	--	1	1	44.7 ft.	

10-11-1900



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